



ADDENDUM NO. 2

Dated: May 16, 2016

ELIZABETH RIVER TRAIL – PHASE 4C/5

Except as may be otherwise described, bidding requirements, materials, and workmanship for the work described herein shall conform to all requirements of the original Contract Documents. The following Addendum to the drawings and specifications are made a part of the project and takes precedence over the section of the specifications, in part, and/or drawings, as originally written.

This Addendum consists of nine (9) pages and eleven (11) Plans.

ITEM NO. DESCRIPTION

1. SPECIFICATIONS; Form of Bid; Pages 1.3-9 through 1.3-15

Remove: Pages 1.3-9 through 1.3-15

Replace with: Pages 1.3-9 – Addendum 2 through 1.3-15 – Addendum 2

Summary: Area 1 – Item No. 12 – Quantity change
 Area 1 – Item No. 29 – Description & Quantity change
 Area 1 – Item No. 30 – Quantity change
 Area 1 – Item No. 61 – Item added
 Area 3 – Item No. 19 – Quantity change
 Area 3 – Item No. 20 – Quantity change
 Area 3 – Item No. 21 – Description change
 Area 3 – Item No. 37 – Quantity Change

2. SPECIFICATIONS; Section 513 – Mobilization

Remove: Section 513 in its entirety

Replace with: Section 513 – Addendum No. 2

3. DRAWINGS:

Remove: Sheets 2, 4, 4A, 4B, 4D, 6A, 6C, 6F, 7, 7A, and 8

Replace with: Sheets 2, 4, 4A, 4B, 4D, 6A, 6C, 6F, 7, 7A and 8 of this Addendum.

3. Receipt of this addendum shall be acknowledged on page 1.3-1 of the Bid Form

Prepared by: Robert Vaughan
Design Project Manager

Issued by: Toni Alvarez
Contract Monitoring Specialist

SCHEDULE OF UNIT PRICES

ELIZABETH RIVER TRAIL – PHASE 4C/5

OWNER: CITY of NORFOLK, VIRGINIA

The unit prices have been computed in accordance with Subparagraph 7.3.3.2 of the General Conditions. Bidder acknowledges that estimated quantities are not guaranteed, and are solely for the purpose of comparison of Bids, and final payment for all Unit Price Bid items will be based on actual quantities provided, determined as provided in the Contract Documents. The prices quoted shall include, without exception, all materials, labor, equipment, appliances, clean-up, applicable sales, use and other taxes, building permits or fees, and the Contractor's labor, overhead, profit, mobilization and other mark-ups, and in full accordance with the Specifications. Include allowance for waste where appropriate. The unit prices shall be maintained throughout the contract period. Unit prices shall be used in determining additions or deductions from the TOTAL CONTRACT AWARD amount in the event of changes in the work.

Item #	Description	Unit	Qty	Price	Extension
	AREA 1				
1	Mobilization (Section 513)	LS	1		
2	Construction Surveying (Section 517)	LS	1		
3	Maintenance of Traffic (Section 512)	LS	1		
4	Clearing and Grubbing (Section 301)	LS	1		
5	Temporary Construction Entrance (Section 303)	EA	1		
6	Temporary Silt Fence (Section 303)	LF	210		
7	Temporary Tree Protection (Section 303)	LF	530		
8	Temporary Inlet Protection (Section 303)	EA	2		
9	Remove Existing Curb and Gutter (Section 510)	LF	235		
10	Remove Existing Retaining Wall (Section 510)	LF	80		
11	Remove Existing Concrete Sidewalk (Section 510)	SY	200		
12	Remove Existing Reinforced Concrete Pavement (Section 510)	SY	310		
13	Remove Existing Asphalt Sidewalk (Section 510)	SY	115		
14	Remove Existing Bushes and Ground Cover (Section 510)	LS	1		
15	Remove Existing Handrail (Section 5100)	LF	38		
16	Remove Existing Bollard (Section 510)	EA	1		

ATTACHMENT A-1

Item #	Description	Unit	Qty	Price	Extension
17	Remove Existing Lane Delineators (Section 510)	EA	13		
18	Selective Tree Removal (Section 601)	LS	1		
19	Reset Existing Manhole Top (Section 510)	EA	1		
20	Sign Removal (Section 510)	EA	9		
21	Saw Cut (Asphalt) (Section 703)	LF	85		
22	Saw Cut (Concrete) (Section 703)	LF	55		
23	Saw Cut (Reinforced Concrete) (Section 703)	LF	200		
24	Hydraulic Cement Concrete Sidewalk (4" Depth) (HRPDC CI-09) (Section 504)	SY	315		
25	Hydraulic Cement Concrete Driveway (6" Depth) (HS-207) (Section 504)	SY	6		
26	Handrail (Galvanized Steel) (Section 504)	LF	110		
27	Concrete Class A3 (Wall and Curb Combination) (Section 404)	CY	25		
28	Modified Std. 6" Parkway Curb (HS-201) (Section 404)	LF	20		
29	Norfolk Std. 6" Curb and Gutter (HS-201) (Section 502)	LF	80		
30	Norfolk Std. Radial 6" Curb and Gutter (HS-201) (Section 502)	LF	110		
31	CG-12 Curb Ramp w/Detectable Warning Surface (Section 504)	SY	10		
32	Regular Excavation (Section 303)	CY	120		
33	Aggregate Base Matl. Type I, No. 21A (Section 308)	TON	30		
34	Select Material Type II, Min CBR-20 (Section 305)	CY	250		
35	Grass Planting (HS-601) (Section 602)	SY	480		
36	Tree Root Protection (Section 609)	LF	225		
37	Reflectorized Sleeve (Section 702)	EA	1		
38	Furnish and Install R1-1 Sign (30"x30") (Section 701)	SF	7		
39	Furnish and Install R1-2 Sign (30"x30") (Section 701)	SF	7		

ATTACHMENT A-2

Item #	Description	Unit	Qty	Price	Extension
40	Furnish and Install R3-1 Sign (24"x24") (Section 701)	SF	4		
41	Furnish and Install W5-1 Sign (30"x30") (Section 701)	SF	7		
42	Furnish and Install Mod. W5-2 Sign (30"x30") (Section 701)	SF	7		
43	Furnish and Install W6-1 Sign (36"x12") (Section 701)	SF	3		
44	Furnish and Install W16-9P Sign (24"x12") (Section 701)	SF	2		
45	Furnish and Install "WALK BICYCLES THROUGH UNDERPASS" (24"X18") (Section 701)	SF	3		
46	Furnish and Install "DO NOT BLOCK DRIVEWAY" SIGN (18"X12") (Section 701)	SF	4		
47	Furnish and Install "NO MOTOR VEHICLES" (24"X18") (Section 701)	SF	3		
48	Furnish and Install "PARK HOURS" (18"X12") (Section 701)	SF	2		
49	Furnish and Install "RULES" (12"X6") (Section 701)	SF	1		
50	Furnish and Install Sign Post Steel (Section 700)	LF	96		
51	Type B, Class VI Pavement Line Marking 4" (Section 704)	LF	315		
52	Type B, Class VI Pavement Line Marking 6" (Section 704)	LF	70		
53	Type B, Class VI Pavement Line Marking 12" (Section 704)	LF	65		
54	Type B, Class VI Pavement Line Marking 24" (Section 704)	LF	55		
55	Pavement Message Marking Elongated Arrow Single (Section 704)	EA	1		
56	Pavement Message Marking "Yield" (Section 704)	EA	1		
57	Pavement Message Marking "Only" (Section 704)	EA	1		
58	Flame Amur Maple (1.5" Cal.) (Section 605)	EA	5		

ATTACHMENT A-3

Item #	Description	Unit	Qty	Price	Extension
59	Eastern Redbud (1.5" Cal.) (Section 605)	EA	5		
60	Red Oak (1.5" Cal.) (Section 605)	EA	1		
61	Plain Hydraulic Cement Concrete Pavement (8" Depth)	SY	3		
	SUBTOTAL – AREA 1				\$
	AREA 2				
1	Mobilization (Section 512)	LS	1		
2	Maintenance of Traffic (Section 303)	LS	1		
3	Temporary Inlet Protection (Section 510)	EA	3		
4	Remove Existing Curb and Gutter (Section 510)	LF	75		
5	Remove Existing Concrete Sidewalk (Section 510)	SY	70		
6	Reset Valve Box (Section 510)	EA	1		
7	Reset Cleanout (Section 703)	EA	1		
8	Saw Cut (Concrete) (Section 504)	LF	30		
9	CG-12 Curb Ramp w/Detectable Warning Surface (Section 504)	SY	13		
10	Hydraulic Cement Concrete Sidewalk (4" Depth) (HRPDC CI-09) (Section 502)	SY	46		
11	Std. 6" Curb and Gutter (HS-202) (Section 502)	LF	15		
12	Radial Std. 6" Curb and Gutter (HS-202) (Section 502)	LF	15		
13	Std. 6" Parkway Curb (HS-201) (Section 303)	LF	65		
14	Regular Excavation (Section 305)	CY	16		
15	Select Material Type II, Min CBR-20 (Section 602)	CY	16		
16	Grass Planting (HS-601) (Section 302)	SY	45		
17	Reconstructed Manhole (Section 302)	EA	1		
	SUBTOTAL AREA 2				\$
	AREA 3				
1	Mobilization (Section 513)	LS	1		
2	Construction Surveying (Section 517)	LS	1		

ATTACHMENT A-4

Item #	Description	Unit	Qty	Price	Extension
3	Maintenance of Traffic (Section 512)	LS	1		
4	Clearing and Grubbing (Section 301)	LS	1		
5	Temporary Construction Entrance (Section 303)	EA	2		
6	Temporary Silt Fence (Section 303)	LF	595		
7	Temporary Tree Protection (Section 303)	LF	280		
8	Temporary Inlet Protection Section 303)	EA	1		
9	Remove Existing Curb and Gutter (Section 510)	LF	53		
10	Remove Existing Concrete Sidewalk (Section 510)	SY	18		
11	Remove Existing Concrete Flume (Section 510)	SY	7		
12	Selective Tree Removal (Section 601)	LS	1		
13	Removal of Rip Rap (Section 510)	LS	1		
14	Saw Cut (Concrete) (Section 703)	LF	8		
15	Hydraulic Cement Concrete Sidewalk (4" Depth) (HRPDC CI-09) (Section 504)	SY	450		
16	CG-12 Curb Ramp w/Detectable Warning Surface (Section 504)	SY	18		
17	Std. 6" Curb and Gutter (HS-202) (Section 502)	LF	76		
18	Regular Excavation (Section 303)	CY	100		
19	Select Material Type II, Min CBR-20 (Section 305)	CY	150		
20	Erosion Control Stone Class A1 (EC-1) (Section 414)	TON	4		
21	Erosion Control Stone Class I (24" Riprap) (Section 414)	TON	30		
22	Erosion Control Protective Covering (EC-2) (Section 414)	SY	70		
23	Geotextile (Embankment Stabilization) (Section 303)	SY	100		
24	VDOT #57 Stone	TON	15		
25	Grass Planting (HS-601) (Section 602)	SY	585		
26	Root Barrier (Section 609)	LF	210		

ATTACHMENT A-5

Item #	Description	Unit	Qty	Price	Extension
27	Timber Handrail (54" tall) (Section 418)	LF	245		
28	Steel Bollard (Section 507)	EA	2		
29	Furnish and Install R1-1 Sign (30"x30") (Section 701)	SF	5		
30	Furnish and Install R1-2 Sign (30"x30") (Section 701)	SF	7		
31	Furnish and Install R4-11 Sign (30"x30") (Section 701)	SF	13		
32	Furnish and Install R5-3 Sign (24"x24") (Section 701)	SF	8		
33	Furnish and Install D11-1 Sign (18"x18") (Section 701)	SF	6		
34	Furnish and Install "Elizabeth River Trail" Sign (8"x10") (Section 701)	SF	2		
35	VDOT Standard Endwall (EW-1) (Section 302)	EA	1		
36	15" Concrete Pipe, Class III (Section 302)	LF	15		
37	24" Concrete Pipe, Class III (Section 30)	LF	24		
38	Modified VDOT Standard DI-3C (L=6') (Section 302)	EA	1		
39	Manhole MH-1 (Section 302)	EA	1		
40	Furnish and Install Sign Post Steel (Section 700)	LF	60		
41	Pavement Message Marking Share Road Symbol (Section 704)	EA	4		
42	Pavement Message Marking "Yield" (Section 704)	EA	1		
43	Bridge	LS	1		
44	Flame Amur Maple (1.5" Cal.) (Section 605)	EA	2		
45	Eastern Redbud (1.5" Cal.) (Section 605)	EA	6		
46	Sugar Tyme Crab Apple (1.5" Cal.) (Section 605)	EA	3		
47	Red Oak (1.5" Cal.) (Section 605)	EA	1		

Item #	Description	Unit	Qty	Price	Extension
48	Littleleaf (1.5" Cal.) (Section 605)	EA	1		
	SUBTOTAL AREA 3				\$

	TOTAL BID (AREAS 1, 2, AND 3)				\$
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TOTAL BID: _____

_____ **DOLLARS AND** _____ **CENTS**

CONTRACTOR'S SIGNATURE / DATE

SECTION 513 – MOBILIZATION

VDOT Road and Bridge Specifications, 2007 Edition, shall be followed unless otherwise amended or supplemented with the specifications contained herein. Where conflicts occur, the specifications contained herein shall prevail.

513.02 – Measurement and Payment

Replace Section 513.02 – Measurement and Payment with the following:

MOBILIZATION/DEMOBILIZATION shall include measurement and payment as a lump sum price. This includes incidentals such as bond, insurance, temporary facilities, coordination with private utility relocations, etc. Sixty percent (60%) of the lump sum price will be paid to the CONTRACTOR upon completion of his mobilization at the work site. The remaining forty percent (40%) will be paid to the CONTRACTOR upon completion of demobilization. In the event the OWNER considers that the amount in this item, sixty percent (60%) which represents mobilization and forty percent (40%) which represents demobilization, does not bear a reasonable relation to the cost of the work in this contract, the OWNER may require the CONTRACTOR to produce cost data to justify this portion of the bid. Failure to justify such price to the satisfaction of the OWNER will result in payment of actual mobilization costs, as determined by the OWNER, at the completion of mobilization, and actual demobilization costs, as determined by the OWNER, at the completion of demobilization. The determination of the OWNER is not subject to appeal.

++END OF SECTION++

Saved Friday, May 13, 2016 1:51:31 PM MBL\The Plotted Monday, May 16, 2016 3:57:35 PM Blythe, Magdalena

Legend					
Exist.	Prop.	Exist.	Prop.		
				CONCRETE PAVEMENT/SIDEWALK	
				STANDARD DUTY PAVEMENT	
				HEAVY DUTY PAVEMENT	
				RIPRAP	
				CONSTRUCTION ENTRANCE	
				TOP OF CURB ELEVATION	
				BOTTOM OF CURB ELEVATION	
				FLOW LINE ELEVATION	
				EDGE OF PAVEMENT ELEVATION	
				SPOT ELEVATION	
				TOP & BOTTOM OF WALL ELEVATION	
				BORING LOCATION	
				TEST PIT LOCATION	
				MONITORING WELL	
				UNDERDRAIN	
				DRAINAGE LINE	
				ROOF DRAIN	
				SEWER LINE	
				OVERHEAD WIRE	
				WATER LINE	
				FIRE PROTECTION LINE	
				DOMESTIC WATER LINE	
				GAS LINE	
				UNDERGROUND ELECTRIC	
				TELEPHONE LINE	
				FIRE ALARM	
				CABLE TV	
				DRAIN INLET (VDOT DI-1 OR DI-7)	
				DRAIN INLET (VDOT DI-3B)	
				DRAIN INLET (VDOT DI-3C)	
				DRAIN MANHOLE	
				TRENCH DRAIN	
				PLUG OR STUB	
				FLARED END SECTION	
				HEADWALL	
				SEWER MANHOLE	
				SEWER CLEANOUT	
				CURB STOP & BOX	
				WATER VALVE & BOX	
				TAPPING SLEEVE, VALVE & BOX	
				SIAMESE CONNECTION	
				FIRE HYDRANT	
				WATER METER	
				POST INDICATOR VALVE	
				WATER WELL	
				GAS GATE	
				GAS METER	
				ELECTRIC MANHOLE	
				ELECTRIC METER	
				LIGHT POLE	
				TELEPHONE MANHOLE	
				TRANSFORMER PAD	
				UTILITY POLE	
				GUY POLE	
				GUY WIRE & ANCHOR	
				HAND HOLE	
				PULL BOX	
				MATCHLINE	

Abbreviations	
General	
ABAN	ABANDON
ACR	ACCESSIBLE CURB RAMP
ADJ	ADJUST
APPROX	APPROXIMATE
BIT	BITUMINOUS
BOS	BOTTOM OF STAIRS
BS	BOTTOM OF SLOPE
BWLL	BROKEN WHITE LANE LINE
CONC	CONCRETE
DYCL	DOUBLE YELLOW CENTER LINE
EL	ELEVATION
ELEV	ELEVATION
EXIST	EXISTING
FDN	FOUNDATION
GRAN	GRANITE
GTD	GRADE TO DRAIN
LA	LANDSCAPE AREA
LOD	LIMIT OF DISTURBANCE
MAX	MAXIMUM
MIN	MINIMUM
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PERF	PERFORATED
PROP	PROPOSED
REM	REMOVE
RET	RETAIN
R&D	REMOVE AND DISPOSE
R&R	REMOVE AND RESET
SWEL	SOLID WHITE EDGE LINE
SWLL	SOLID WHITE LANE LINE
TOS	TOP OF STAIRS
TS	TOP OF SLOPE
TP	TYPICAL
Utility	
CB	CATCH BASIN
CMP	CORRUGATED METAL PIPE
CO	CLEAN OUT
DCB	DOUBLE CATCH BASIN
DMH	DRAIN MANHOLE
DI	DRAIN INLET
OIP	CAST IRON PIPE
COND	CONDUIT
DIP	DUCTILE IRON PIPE
ES	END SECTION
EW	END WALL
F&G	FRAME AND GRATE
F&C	FRAME AND COVER
FM	FORCE MAIN
GT	GREASE TRAP
GI	GUTTER INLET
HDPE	HIGH DENSITY POLYETHYLENE PIPE
HH	ELECTRIC HANDHOLE
HW	HEADWALL
HYD	HYDRANT
MES	METAL END SECTION
INV	INVERT ELEVATION
I=	INVERT ELEVATION
PWW	PAVED WATER WAY
PVC	POLYVINYLCHLORIDE PIPE
RCP	REINFORCED CONCRETE PIPE
R=	RIM ELEVATION
SMH	SEWER MANHOLE
TSV	TAPPING SLEEVE, VALVE AND BOX
UP	UTILITY POLE

Notes:	
GENERAL NOTES	
1. FOR WORK IN THE CITY OF NORFOLK'S RIGHT-OF-WAY, CONTACT THE FOLLOWING 48 HOURS IN ADVANCE -RIGHT-OF-WAY PERMITS: 664-7306 -DRAINAGE: 823-4000 -LANDSCAPING: 441-243 -UTILITIES: 664-6701 (5 DAYS IN ADVANCE) -CITY FORESTER: 823-4024 -ENV SERVICES: 664-4368	
2. LOCATIONS OF EXISTING CABINETS, STRAIN POLES, TELEPHONE, TELEPHONE POLES, AND JUNCTION BOXES SHOWN ON THE PLANS ARE APPROXIMATE.	
3. PRIOR TO BEGINNING WORK 'MISS UTILITY OF VIRGINIA' (811) SHALL BE CONTACTED IN ORDER TO DETERMINE THE EXTENT AND LOCATION OF ALL NECESSARY UNDERGROUND UTILITIES WITHIN THE PROJECT LIMITS. UTILITY COMPANIES SHALL BE NOTIFIED THROUGH 'MISS UTILITY OF VIRGINIA' 48 HOURS IN ADVANCE OF ANY EXCAVATION WITHIN THE PROXIMITY OF THEIR UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING, AT HIS OWN EXPENSE, ANY EXISTING UTILITIES, PAVEMENT, CONCRETE ITEMS, PIPES, ETC. THAT ARE DAMAGED DURING CONSTRUCTION. AT THE CONCLUSION OF WORK IN AN AREA, ALL UTILITY MARKINGS SHALL BE REMOVED. THE LOCATION OF UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE AND ALL INVOLVED UTILITIES MAY NOT BE SHOWN ON THE PLANS.	
4. PROTECTIVE MEASURES SHALL BE TAKEN DURING THIS PROJECT TO PRESERVE THE STRUCTURAL INTEGRITY OF EXISTING UNDERGROUND UTILITIES AND SHALL ADEQUATELY SUPPORT UTILITIES IN AN OPEN TRENCH TO PROTECT UTILITIES FROM DAMAGE. DAMAGE TO EXISTING UTILITIES SHALL BE REPAIRED AT NO COST TO THE CITY.	
5. ALL ITEMS PERTAINING TO THIS PROJECT SHALL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE 2008 EDITION OF VDOT ROAD AND BRIDGE STANDARDS, THE 2007 VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS, THE 2009 EDITION OF THE MUTCD, AND THE 2011 EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL.	
6. ANY PAVEMENT, DRIVEWAYS, WALKS, CURBS, ETC. THAT MUST BE CUT OR THAT ARE DAMAGED DURING CONSTRUCTION SHALL BE REPLACED WITH MATCHING MATERIALS.	
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK ZONE SIGNING, DELINEATION OF PAVEMENT MARKINGS AND ANY OTHER TRAFFIC CONTROL DEVICES NECESSARY TO PERFORM THE WORK. UPON COMPLETION OF THE WORK, ALL TEMPORARY DEVICES SHALL BE REMOVED. ALL WORK ZONE PRACTICES AND PRECAUTIONS SHALL BE IN ACCORDANCE WITH THE 2011 EDITION OF THE VIRGINIA WORK AREA PROTECTION MANUAL.	
8. AN APPROVED SITE PLAN DOES NOT PRECLUDE THE NECESSITY OF THE EXCAVATOR, BY STATE LAW, TO CONTACT THE CITY OF NORFOLK DIVISION OF TRANSPORTATION 48 HOURS BEFORE EXCAVATION AT 664-7306. (RIGHT-OF-WAY PERMIT NUMBER REQUIRED)	
9. ALL CONCRETE SHALL BE CLASS A-3 AIR ENTRAINED (3,000 PSI), UNLESS OTHERWISE NOTED.	
10. DISCREPANCIES BETWEEN DRAWINGS AND CONTRACT SPECIFICATIONS SHALL BE REPORTED TO THE ENGINEER IMMEDIATELY FOR CLARIFICATION.	
11. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY OF ALL FIELD CONDITIONS ENCOUNTERED WHICH ARE NOT SHOWN ON THE DRAWINGS AND WHICH WERE NOT REASONABLY ANTICIPATED.	
12. THE CONSTRUCTION SITE, ADJACENT AREAS, AND RIGHT-OF-WAYS SHALL BE KEPT CLEAN AND CLEAR OF CONSTRUCTION DEBRIS AT ALL TIMES.	
13. TOPSOIL, SEED, FERTILIZE AND LIME ALL DISTURBED AREAS WITHIN THE PROJECT LIMITS NOT OCCUPIED BY STRUCTURES, PAVEMENT, SIDEWALKS, ETC. TEMPORARY SEEDING OR STABILIZATION WILL BE REQUIRED WITHIN 7 DAYS OF COMPLETING CONSTRUCTION.	
14. ALL EXISTING TRAFFIC CONTROL DEVICES TO BE REMOVED, INCLUDING SIGNS, SHALL BE RETURNED TO THE CITY OF NORFOLK TRAFFIC OPERATIONS CENTER AT 4505 PATENT ROAD - PHONE 823-1223. CONTRACTOR SHALL BE RESPONSIBLE FOR THE DELIVERY OF ALL EXISTING TRAFFIC CONTROL DEVICES TO THE TRAFFIC OPERATIONS CENTER.	
15. SUBMIT AS-BUILT PLANS TO THE DEPARTMENT OF PUBLIC WORKS DIVISION OF TRANSPORTATION WITHIN TEN DAYS OF PROJECT COMPLETION.	
16. CONTRACTOR TO OBTAIN THE REQUIRED TREE PERMITS, INSTALL ALL TREE PROTECTION FENCING, AND CONTACT THE CITY FORESTER TO DO AN ON-SITE TREE INSPECTION OF TREES SCHEDULED FOR DEMOLITION OR PRUNING WITHIN THE CITY RIGHT-OF-WAY PRIOR TO ANY GROUND DISTURBANCE.	
17. CONTRACTOR TO OBTAIN REQUIRED CITY TREE PERMIT FOR TREE PRUNING REQUIRED ON ANY TREE WITHIN RIGHT-OF-WAY/CITY OF NORFOLK PROPERTY PRIOR TO ANY GROUND DISTURBANCE.	
18. CITY ISSUED TREE PERMIT WILL REQUIRE CERTIFIED ARBORIST TO TRIM OR REMOVE TREES WITHIN RIGHT-OF-WAY/CITY OF NORFOLK PROPERTY.	
FEES	
1. CITY CONTRACTORS: EFFECTIVE JULY 1, 2014 CITY CONTRACTORS MUST PAY FOR STREET, LANE, AND SIDEWALK CLOSURES.	
2. CURRENT RIGHT-OF-WAY PERMIT FEES: HTTP://WWW.NORFOLK.GOV/DOCUMENTCENTER/VIEW/789	
CONSTRUCTION NOTES	
1. ALL TRAFFIC CONTROL ITEMS WILL BE CONSTRUCTED AND INSTALLED IN ACCORDANCE WITH THE 2007 "VIRGINIA DEPARTMENT OF TRANSPORTATION ROAD AND BRIDGE SPECIFICATIONS". CONTRACTOR SHALL INSTALL ALL CONSTRUCTION ITEMS WITHIN EXISTING CITY OF NORFOLK RIGHT-OF-WAY. ADDITIONAL EASEMENTS AND/OR RIGHT-OF-WAY ARE NOT ALLOWED FOR CONSTRUCTION AND/OR MOBILIZATION.	
2. CONTRACTOR SHALL INSTALL ALL TRAFFIC SIGNS AND PAVEMENT MARKINGS IN ACCORDANCE WITH THE 2009 EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AND 2011 VIRGINIA SUPPLEMENT TO THE MUTCD.	
3. THE CONTRACTOR SHALL INSTALL STOP BARS AND CROSSWALKS AS SHOWN ON THE PLAN SHEETS. THE CONTRACTOR WILL ERADICATE ANY EXISTING MARKINGS THAT INTERFERE OR CONFLICT WITH THE NEW MARKINGS.	
4. CONTRACTOR TO REMOVE EXISTING CURB AND GUTTER WITHOUT DAMAGING EXISTING ASPHALT ROADWAY SURFACE. ANY DAMAGED ASPHALT SHALL BE PATCHED ACCORDING TO DETAIL HS-301 (ASPHALT) OF CITY STANDARDS AT THE CONTRACTORS EXPENSE.	
5. ALL PAVEMENT MARKINGS SHALL BE TYPE B CLASS VI PREFORMED PAVEMENT LINE MARKING TAPE, AS NOTED ON THE PLANS, AND ARE TO BE INSTALLED IN ACCORDANCE WITH THE 2008 VDOT ROAD AND BRIDGE STANDARDS. WHERE PAVEMENT MARKINGS ARE ERADICATED, INSTALLATION OF NEW PAVEMENTS MARKINGS MUST BE COMPLETED WITHIN 24 HOURS. OTHERWISE, TEMPORARY PAVEMENT MARKINGS SHALL BE INSTALLED.	
6. ALL EQUIPMENT AND MATERIALS TO BE REMOVED AND SALVAGED ARE TO BE DELIVERED TO THE CITY OF NORFOLK TRAFFIC OPERATIONS CENTER AT 4505 PATENT ROAD (823-1233). COORDINATE DELIVERY OF SALVAGED MATERIALS WITH THE PROJECT ENGINEER AND THE TRAFFIC OPERATION DIVISION CENTER AT LEAST 48 HOURS PRIOR TO DELIVERY.	
7. FLOWABLE FILL IS NOT AN APPROVED MATERIAL FOR USE IN THE CITY OF NORFOLK FOR BACKFILL WITHOUT PRIOR APPROVAL. THE SELECT MATERIAL AND 21A STONE WILL BE IN ACCORDANCE WITH THE 2007 VDOT ROAD AND BRIDGE SPECIFICATIONS. FOR BACKFILL AROUND THE PIPE USE SELECT MATERIAL (SECTION 207) - TYPE I AND 20 CBR COMPACTION. FOR THE SUB BASE MATERIAL USE 6" MIN. VDOT 21A STONE IN ACCORDANCE TO SECTION 208.	
8. ANY EXCAVATION IN THE ROADWAY MUST BE PATCHED WITH ASPHALT. STONE IS NOT ACCEPTABLE.	
BONDS	
1. THE CONTRACTOR WILL BE REQUIRED TO POST A CASH, CHECK, OR SURETY BOND OR LETTER OF CREDIT TO EXCAVATE IN THE RIGHT-OF-WAY. DOWNLOAD THE FORM: HTTP://WWW.NORFOLK.GOV/DOCUMENTCENTER/VIEW/1406	
2. BONDS AMOUNT SHOULD INCLUDE 100% TOTAL COST OF RIGHT-OF-WAY INSTALLATION INCLUDING STREETLIGHTS, WATER, SEWER, STORM, BMPS, ROADWAY, SIDEWALK, CURB, GUTTER.	
3. BOND WILL BE REDUCED UP TO 10% FROM THE DATE OF FINAL INSPECTION FOR A 2 YEAR WARRANTY TERM. A SEPARATE WARRANTY BOND IS ACCEPTABLE IN LIEU OF A BOND REDUCTION. A LETTER REQUESTING RELEASE OR REDUCTION MUCH BE SENT TO THE RIGHT-OF-WAY PERMITS OFFICE	

FHWA REGION	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
3	VA	TEA-5A03(734)	8711	EN00-122-138	2

EXCAVATION AND RESTORATION IN THE RIGHT-OF WAY-NOTES

1. ALL WORK WITHIN THE RIGHT OF WAY SHALL COMPLY WITH THE CITY OF NORFOLK RIGHT-OF-WAY EXCAVATION & RESTORATION MANUAL, (ORDNANCE NO. 40,778), DEPARTMENT OF PUBLIC WORKS RIGHT-OF-WAY DIVISION. DOWNLOAD AT [HTTP://WWW.NORFOLK.GOV/DOCUMENTCENTER/VIEW/779](http://www.norfolk.gov/documentcenter/view/779). IT IS IMPORTANT THAT CONTRACTORS FAMILIARIZE THEMSELVES WITH THE REQUIREMENTS OUTLINED IN THE MANUAL. FAILURE TO DO SO MAY IMPACT PROJECT COSTS. ALSO SEE "OTHER" IN THIS SECTION. EXCEPTIONS MAY BE PERMITTED. A REVIEW MEETING WITH RIGHT-OF-WAY IS REQUIRED. CONTACT PUBLIC WORKS AT PWROW@NORFOLK.GOV TO SCHEDULE.

2. ALL WORK WITHIN THE RIGHT-OF-WAY SHALL COMPLY WITH THE CITY OF NORFOLK DESIGN STANDARDS. DOWNLOAD AT [HTTP://WWW.NORFOLK.GOV/INDEX.ASPX?NID=819](http://www.norfolk.gov/index.aspx?nid=819). EXCEPTIONS MAY BE PERMITTED. A REVIEW MEETING WITH RIGHT-OF-WAY IS REQUIRED. CONTACT PUBLIC WORKS AT PWROW@NORFOLK.GOV TO SCHEDULE.

PERMITS

1. A PERMIT IS REQUIRED TO PERFORM EXCAVATION AND INSTALLATION WORK OF ANY KIND IN THE RIGHT-OF-WAY. APPLICATIONS: [HTTP://WWW.NORFOLK.GOV/INDEX.ASPX?NID=362](http://www.norfolk.gov/index.aspx?nid=362)

2. A PERMIT IS REQUIRED TO SLOW, CLOSE, REDIRECT, DETOUR, OR ALTER VEHICULAR AND PEDESTRIAN TRAFFIC FOR ANY DURATION. APPLICATIONS: [HTTP://WWW.NORFOLK.GOV/INDEX.ASPX?NID=362](http://www.norfolk.gov/index.aspx?nid=362)

3. A PERMIT IS REQUIRED FOR LANE OR SIDEWALK CLOSURES FOR WORK WASHING, GRADING, OR INSTALLING ANY ITEM ABOVE OR UNDERGROUND. APPLICATIONS: [HTTP://WWW.NORFOLK.GOV/INDEX.ASPX?NID=362](http://www.norfolk.gov/index.aspx?nid=362)

4. A PERMIT IS REQUIRED TO PLACE ANY OBJECT IN THE CITY RIGHT-OF-WAY. APPLICATIONS: [HTTP://WWW.NORFOLK.GOV/INDEX.ASPX?NID=362](http://www.norfolk.gov/index.aspx?nid=362)

5. A PERMIT IS REQUIRED TO HAUL OVERSIZED, OVERWEIGHT, OR OVER HEIGHT LOADS. APPLICATIONS: [HTTP://WWW.NORFOLK.GOV/INDEX.ASPX?NID=362](http://www.norfolk.gov/index.aspx?nid=362)

6. A PERMIT IS REQUIRED FOR TEMPORARY BULK WASTE CONTAINERS PLACED IN THE RIGHT-OF-WAY. IF THE CONTAINER IS PLACED ON PRIVATE PROPERTY A PERMIT FROM THE HEALTH DEPARTMENT IS REQUIRED.

7. CONTRACTOR SHALL PREPARE STORM WATER POLLUTION PREVENTION PLAN (SWPPP).

CONSTRUCTION SEQUENCING

1. UNLESS OTHERWISE APPROVED BY THE CITY OF NORFOLK, WORK IN AREA 3 SHALL NOT BEGIN PRIOR TO OCT. 1, 2016. CONTRACTOR SHALL COMPLETE ALL WORK IN AREA 1 AND AREA 2 PRIOR TO BEGINNING WORK IN AREA 3. CONTRACTOR SHALL SUBMIT A SEQUENCE OF CONSTRUCTION FOR ALL ACTIVITIES TO THE CITY OF NORFOLK FOR REVIEW AND APPROVAL.

HRSD STANDARD CONSTRUCTION NOTES

1. ALL PERSONS MUST CONTACT MISS UTILITY AT PHONE 1-800-552-7001 A MINIMUM OF 48 HOURS PRIOR TO EXCAVATION.

2. CONTRACTOR SHALL CONTACT HRSD INTERCEPTOR OPERATIONS,
DURING OFFICE HOURS: 460-7072
EMERGENCY (AFTER HOURS): 460-3200
AND PROVIDE A MINIMUM OF TWO WORKING DAYS PRIOR TO EXCAVATION OF, OR IN THE VICINITY OF, HRSD INFRASTRUCTURE. MISS UTILITY CALLS DO NOT FULFILL THIS REQUIREMENT.

3. CONTRACTOR SHALL MAKE SURE DURING CONSTRUCTION WORK THAT THE HRSD AIR VENT IS CLEARLY IDENTIFIED AND MAINTAIN VISUAL AT ALL TIMES.

4. CONTRACTOR SHALL BE RESPONSIBLE TO ADJUST THE HRSD AIR VENT CASTING PER HRSD STANDARD DESIGN GUIDELINES TO FINISH GRADE.

5. CONTRACTOR SHALL BE RESPONSIBLE TO ADJUST THE HRSD INFRASTRUCTURE AND APPURTENANCES AT ALL TIMES FOR HRSD MAINTENANCE CREWS ROUTINE MAINTENANCE WORK.

6. CONTRACTOR SHALL DEPLOY ALL NECESSARY MEANS AND METHODS TO ENSURE THE HRSD 48" FORCE MAIN IS PROTECTED DURING THE INSTALLATION OF 12" TIMBER PILES FOR THE PROPOSED BRIDGE

7. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH HRSD INTERCEPTOR MANAGER AT LEAST 48 HOURS PRIOR TO THE PRE-CONSTRUCTION MEETING TO ENSURE A REPRESENTATIVE FROM HRSD IS PRESENT.

8. CONTRACTOR SHALL NOTE THAT SIX MONTHS AFTER COMPLETION OF CONSTRUCTION AND/OR FINAL WORK, HRSD SHALL RE-INSPECT THE PROJECT SITE TO ENSURE ALL HRSD APPURTENANCES ARE IN ORDER. CONTRACTOR SHALL BE EXPECTED TO WARRANTY AND REPAIR ANY DISCREPANCIES NOTED.

1

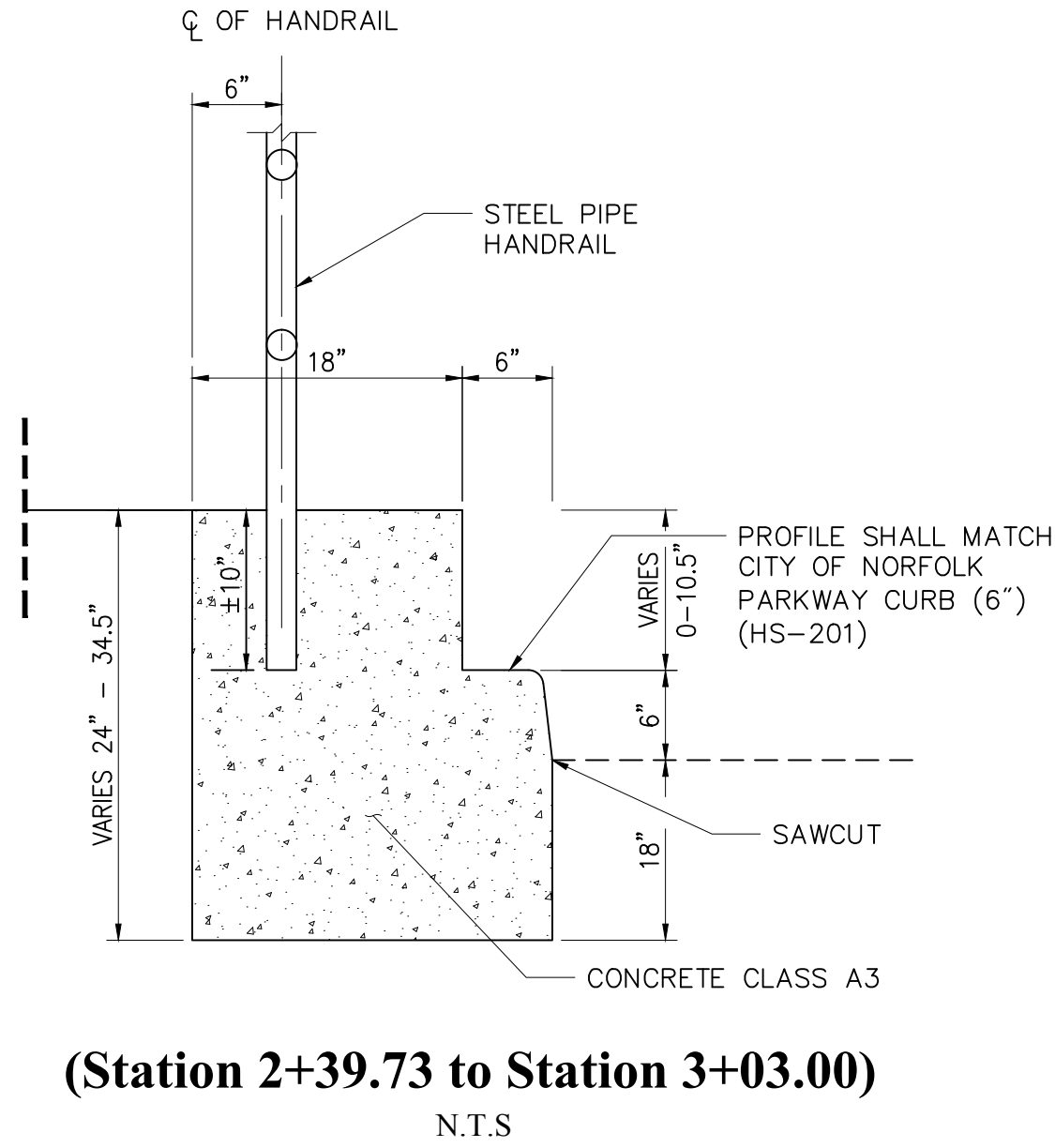
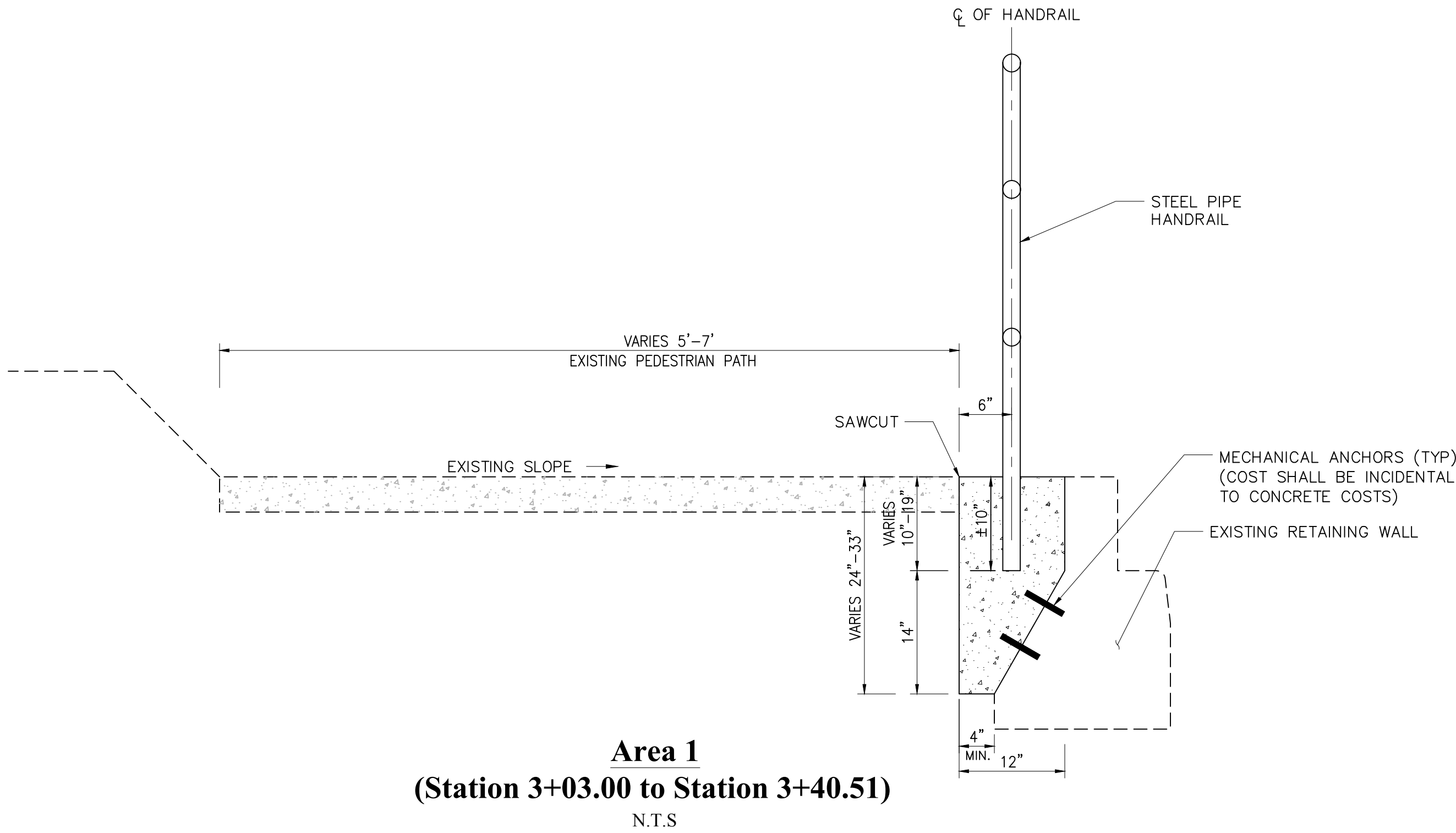
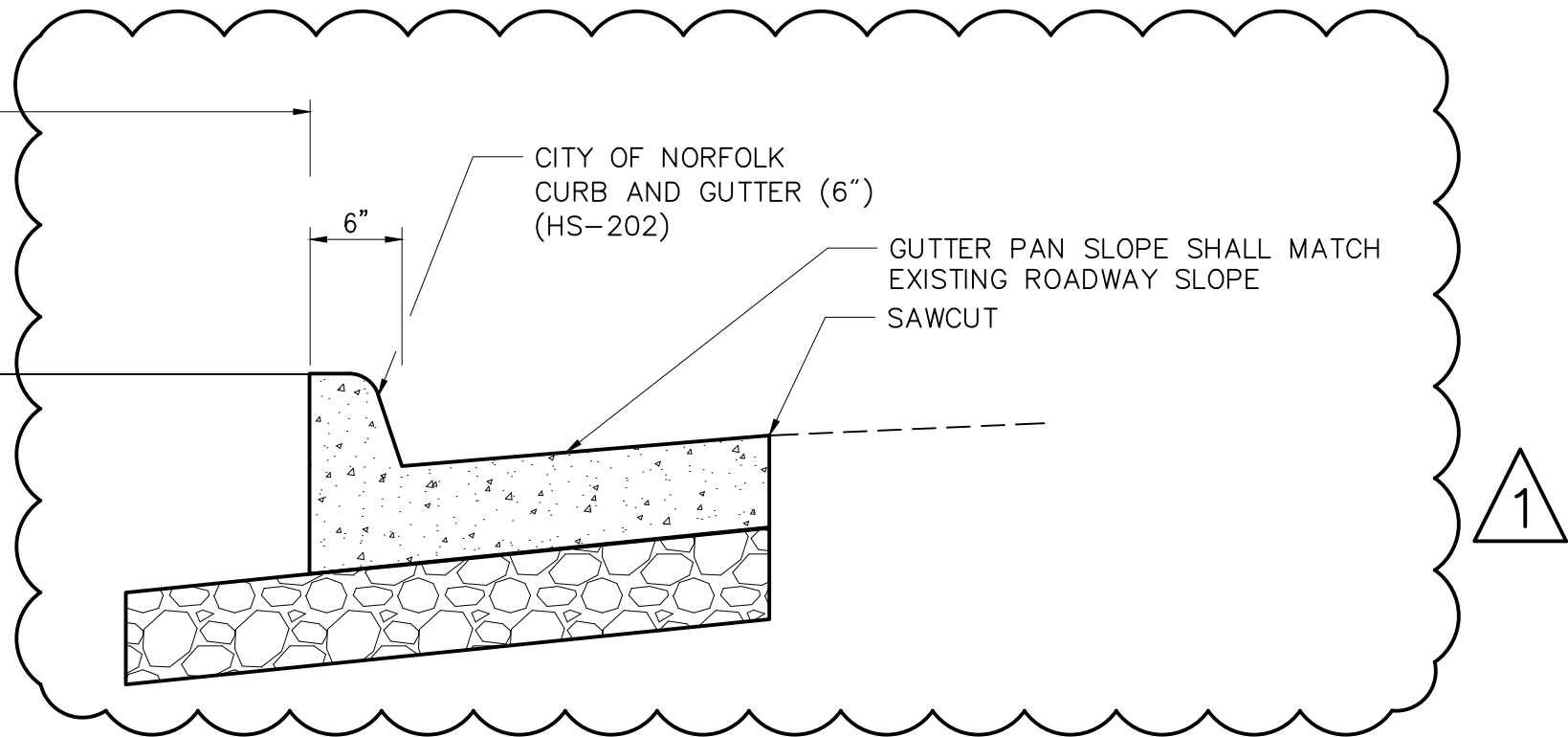
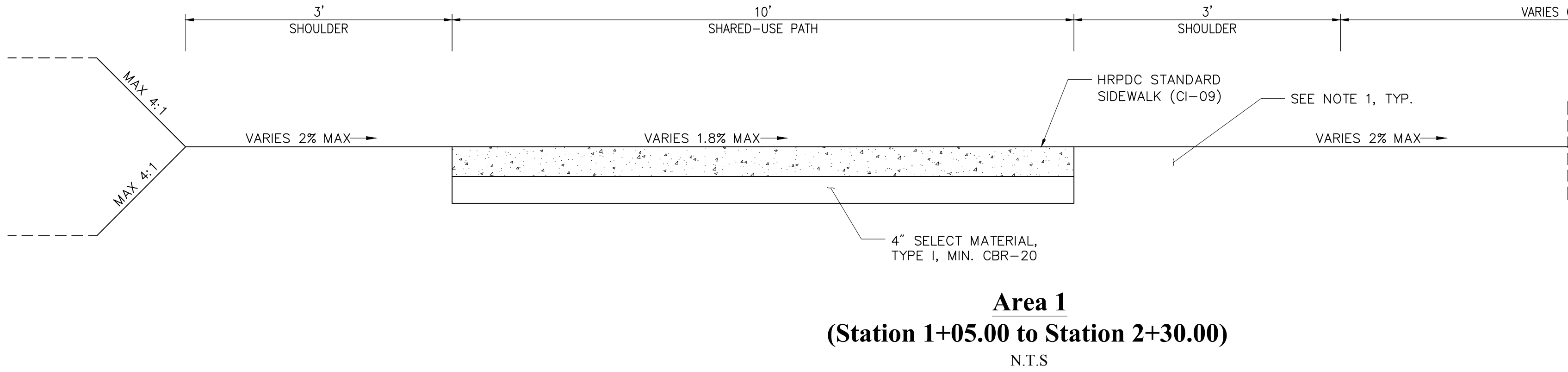
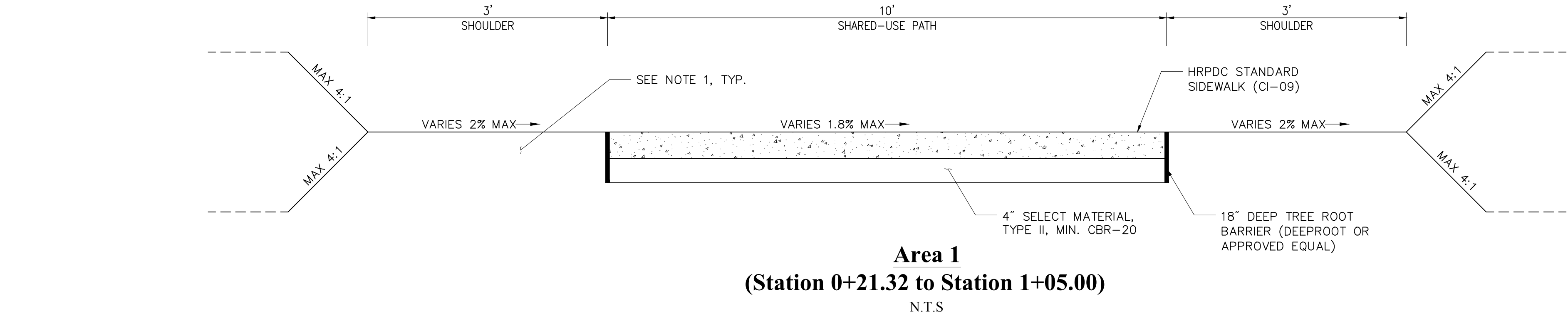
CITY OF NORFOLK DEPARTMENT OF PUBLIC WORKS		March 25, 2016
ELIZABETH RIVER TRAIL - PHASE V (NORFOLK PHASE IV-C)		
LEGEND AND GENERAL NOTES		
Vannase Hangen Brustlin Inc Two Columbus Center 4500 Main Street, Suite 400 Virginia Beach, Virginia 23462 Ph: 757.490.0132 Fax: 757.490.0136		SHEET NO. 2

NO.	DATE	REVISION

Saved Wednesday, May 04, 2016 3:18:34 PM MBLTHE Plotted Wednesday, May 04, 2016 3:34:14 PM Blythe, Magdalena

\\VHB\PROJ\VABEACH\33808.05 NORFOLK ERT PH IV C\CAD\TE\PLANSET\3380805-TYPSXN

FHWA REGION	STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
		PROJECT		PROJECT	
3	VA	TEA-5A03(734)	8711	EN00-122-138	4



NOTE:
1. SHOULDER MATERIAL SHALL BE A COMBINATION OF SELECT MATERIAL, TYPE II, MIN. CBR-20 AND TOPSOIL PER STANDARD GRASS PLANTING DETAIL HS-601 ON SHEET 8E.



CITY OF NORFOLK DEPARTMENT OF PUBLIC WORKS		March 25, 2016
ELIZABETH RIVER TRAIL - PHASE V (NORFOLK PHASE IV-C)		
TYPICAL SECTION AREA 1 - CLAREMONT AND HAMPTON		
VHB Vanasse Hangen Brustlin Inc Two Columbus Center 4500 Main Street, Suite 400 Virginia Beach, Virginia 23462 Ph: 757.490.0132 Fax: 757.490.0136		
SHEEPEN N. ROSSER Lic. No. 041066 02/15/16 PROFESSIONAL ENGINEER		
SHEET NO. 4		

NO.	DATE	REVISION

Erosion and Sediment Control Narrative

1. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM JURISDICTIONAL AGENCIES PRIOR TO THE START OF ANY CONSTRUCTION RELATED ACTIVITIES. A VDOT LAND USE PERMIT IS REQUIRED FOR THIS PROJECT PRIOR TO ISSUANCE OF A LAND DISTURBANCE PERMIT.	6. CONTRACTOR SHALL BEGIN EARTHWORK OPERATIONS.
2. INSTALL CONSTRUCTION TRAFFIC SIGNAGE INDICATING CONSTRUCTION ENTRANCE LOCATIONS AND PRESENCE OF CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH DETAILS.	7. INSTALL CURB AND GUTTER.
3. CLEAR THE AREA REQUIRED TO INSTALL EROSION AND SEDIMENT PERIMETER MEASURES, INCLUDING: SILT FENCE, TREE PROTECTION, AND INLET PROTECTION. EXISTING SANITARY SEWER MANHOLES AND DRAINAGE STRUCTURES SHALL BE PROTECTED AND SERVICE MAINTAINED THROUGHOUT CONSTRUCTION.	8. FINE GRADE AND CONSTRUCT WALKWAY SECTIONS TO THE TOP OF STONE.
4. INSTALL CONSTRUCTION ENTRANCE.	9. FINE GRADE REMAINING SITE AREAS.
5. REMOVE EXISTING CONCRETE, ASPHALT, AND CURB AND GUTTER.	10. INSTALL TOPSOIL, SEED, FERTILIZER, AND LIME ON NON-PAVED AREAS.
	11. APPLY SURFACE TO ALL HARDSCAPE AREAS INCLUDING PAVEMENT AND CONCRETE.
	12. UPON COMPLETION OF THE PROJECT, THE AREA MUST BE RESTORED TO ITS ORIGINAL CONDITION. ALL SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE REMOVED FROM SITE WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR THE OWNER.
	13. INSTALL FINAL SIGNAGE.



<p>CITY OF NORFOLK DEPARTMENT OF PUBLIC WORKS</p>	<p>March 25, 2016</p>
<p>ELIZABETH RIVER TRAIL – PHASE V (NORFOLK PHASE IV–C)</p>	
<p>DEMOLITION AND EROSION & SEDIMENT CONTROL PLAN AREA 1 – CLAREMONT AND HAMPTON</p>	
<p> Vanasse Hangen Brustlin Inc Two Columbus Center 4500 Main Street, Suite 400 Virginia Beach, Virginia 23462 Ph: 757.490.0132 Fax: 757.490.0136</p>	<p>SHEET NO. 4A</p>

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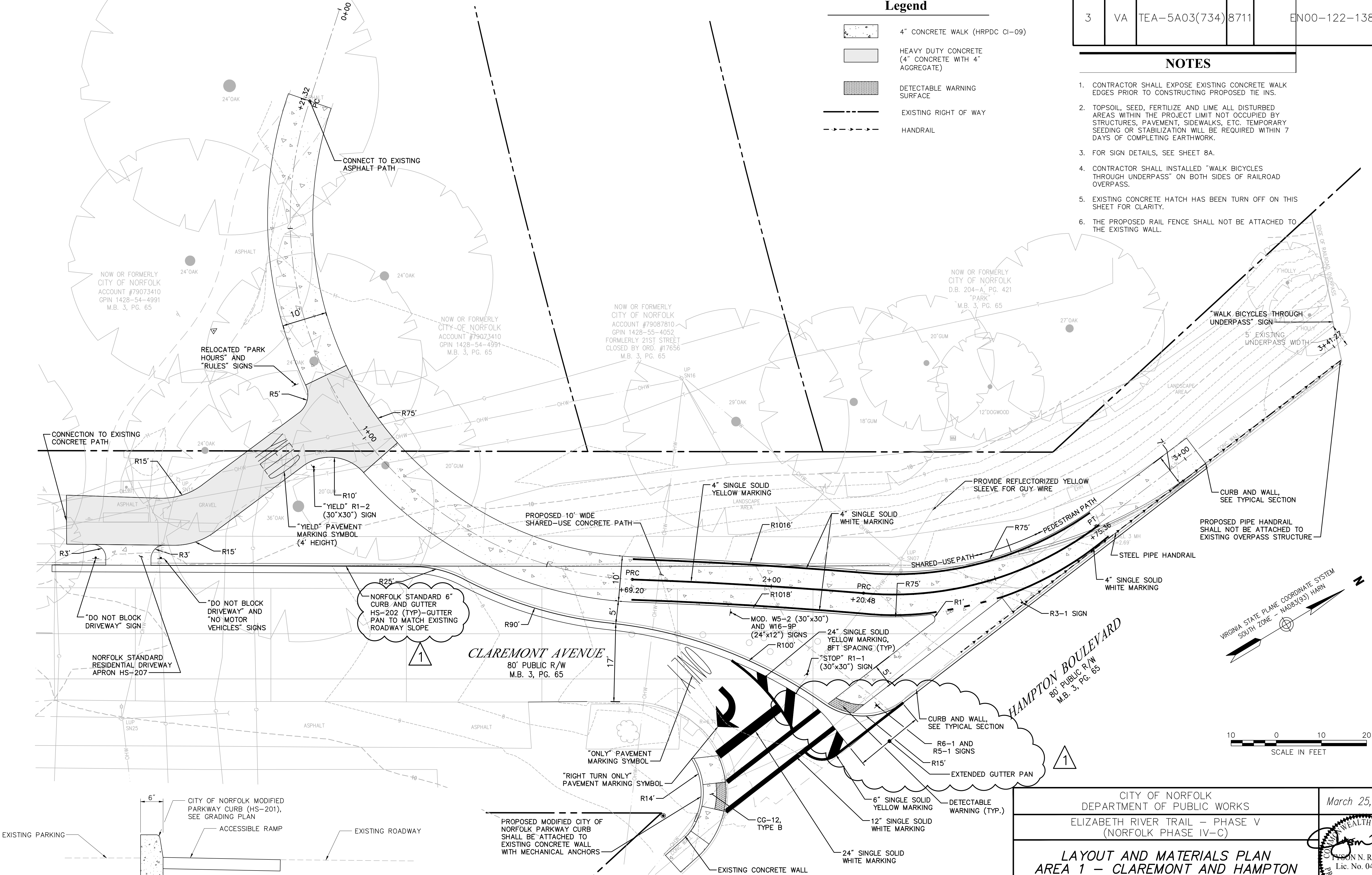
FHWA REGION	STATE	FEDERAL AID		STATE		SHEET NO.
		PROJECT	ROUTE	PROJECT		
3	VA	TEA-5A03(734)	8711	EN00-122-138		4B

NOTES

1. CONTRACTOR SHALL EXPOSE EXISTING CONCRETE WALK EDGES PRIOR TO CONSTRUCTING PROPOSED TIE INS.
2. TOPSOIL, SEED, FERTILIZE AND LIME ALL DISTURBED AREAS WITHIN THE PROJECT LIMIT NOT OCCUPIED BY STRUCTURES, PAVEMENT, SIDEWALKS, ETC. TEMPORARY SEEDING OR STABILIZATION WILL BE REQUIRED WITHIN 7 DAYS OF COMPLETING EARTHWORK.
3. FOR SIGN DETAILS, SEE SHEET 8A.
4. CONTRACTOR SHALL INSTALLED "WALK BICYCLES THROUGH UNDERPASS" ON BOTH SIDES OF RAILROAD OVERPASS.
5. EXISTING CONCRETE HATCH HAS BEEN TURN OFF ON THIS SHEET FOR CLARITY.
6. THE PROPOSED RAIL FENCE SHALL NOT BE ATTACHED TO THE EXISTING WALL.

Legend

- 4" CONCRETE WALK (HRPDC CI-09)
- HEAVY DUTY CONCRETE (4" CONCRETE WITH 4" AGGREGATE)
- DETECTABLE WARNING SURFACE
- EXISTING RIGHT OF WAY
- HANDRAIL



Modified Curb Detail

N.T.S.

NO.	DATE	REVISION

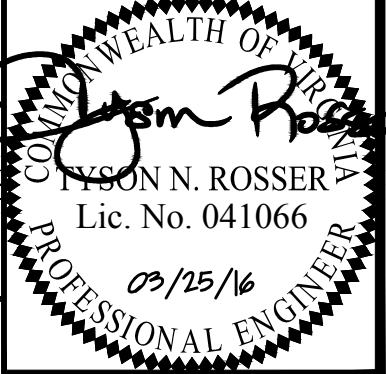


Vanasse Hangen Brustlin Inc
Two Columbus Center
4500 Main Street, Suite 400
Virginia Beach, Virginia 23462
Ph: 757.490.0132 Fax: 757.490.0136

CITY OF NORFOLK
DEPARTMENT OF PUBLIC WORKS
ELIZABETH RIVER TRAIL - PHASE V
(NORFOLK PHASE IV-C)

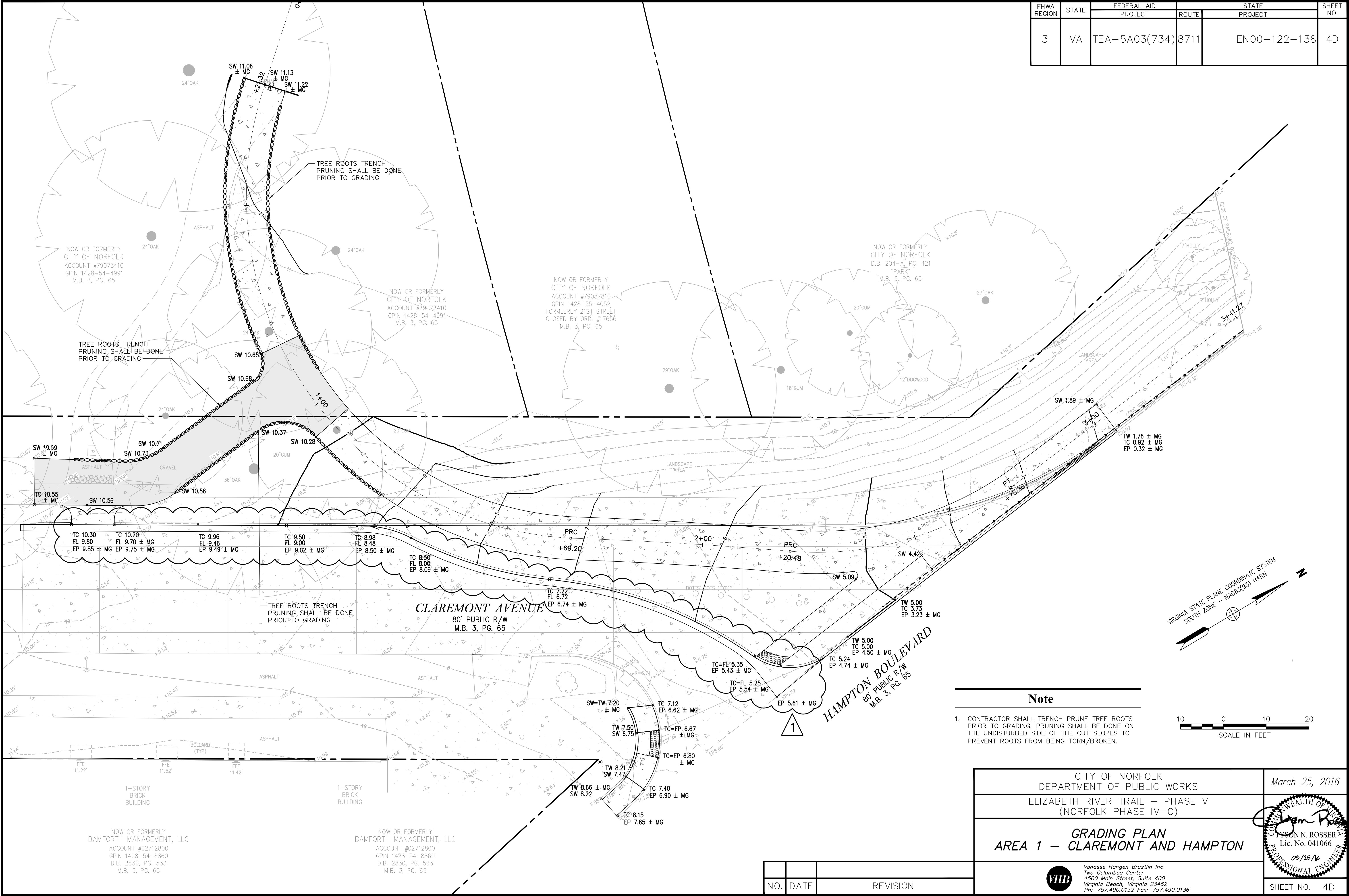
LAYOUT AND MATERIALS PLAN
AREA 1 - CLAREMONT AND HAMPTON

March 25, 2016





SHEET NO. 4B

FHWA REGION	STATE	FEDERAL AID	STATE		SHEET NO.
		PROJECT	ROUTE	PROJECT	
3	VA	TEA-5A03(734)	8711	EN00-122-138	4D



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<p>CITY OF NORFOLK DEPARTMENT OF PUBLIC WORKS</p>	<p>March 25, 2016</p>
<p>ELIZABETH RIVER TRAIL – PHASE V (NORFOLK PHASE IV–C)</p>	
<p>GRADING PLAN AREA 1 – CLAREMONT AND HAMPTON</p>	
 <p>Vanasse Hangen Brustlin Inc Two Columbus Center 4500 Main Street, Suite 400 Virginia Beach, Virginia 23462 Ph: 757.490.0132 Fax: 757.490.0136</p>	<p>SHEET NO. 4D</p>

Saved Friday, April 29, 2016 10:59:57 AM MBL\THE Plotted Wednesday, May 04, 2016 3:43:04 PM Blythe, Magdalena

\\VHB\PROJ\VABEACH\33808.05 NORFOLK ERT PH IV C\CAD\TE\PLANSET\3380805-DW-ER

Notes

- THIS PROPERTY IS LOCATED WITHIN A CITY OF NORFOLK CBPA DESIGNATED INTENSELY DEVELOPED AREA (IDA).
- ALL VEGETATION, WOODY, OR OTHERWISE, EXCEPT LAWN, ORNAMENTAL GRASS AND FLOWERS LESS THAN TWENTY-FOUR (24) INCHES IN HEIGHT WITHIN THE 100' CBPA BUFFER REQUIRES A PERMIT FOR REMOVAL, ALTERATION, OR WORK WITHIN THE CRITICAL ROOT ZONE FROM BUREAU OF ENVIRONMENTAL SERVICES (664-4751) WITH SUBSEQUENT MITIGATION REQUIREMENTS.
- THIS SITE REQUIRES A VSMP GENERAL PERMIT FOR STORMWATER DISCHARGES FROM CONSTRUCTION ACTIVITIES. THE CONTRACTOR IS REQUIRED TO SECURE PERMIT COVERAGE FROM THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY (DEQ) PRIOR TO COMMENCEMENT OF ANY LAND DISTURBANCE REQUIRED BY THE PROJECT BY SUBMITTING A COMPLETE REGISTRATION STATEMENT AND PAYING THE APPROPRIATE PERMIT FEE TO THE CITY OF NORFOLK. THE CONTRACTOR IS

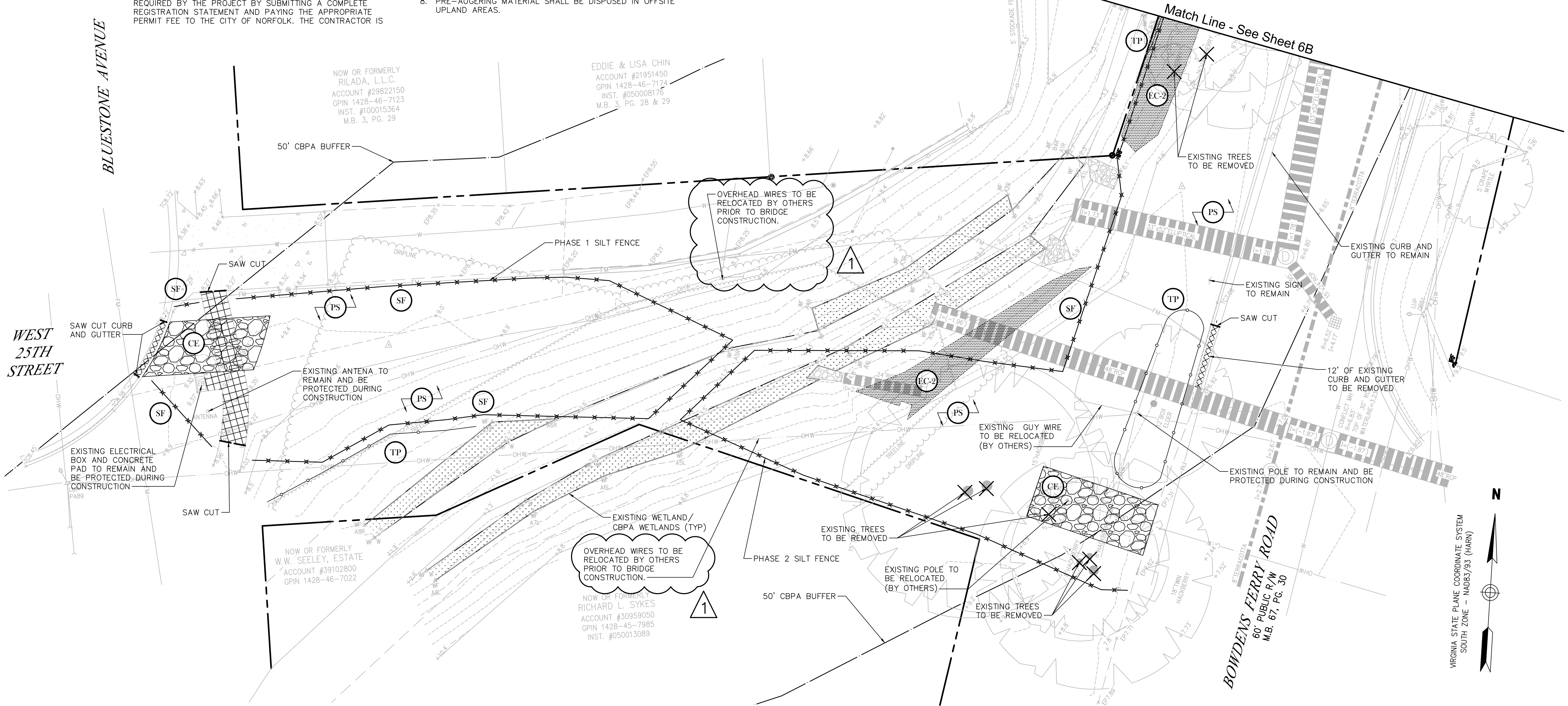
- RESPONSIBLE FOR ENSURING PERMIT COMPLIANCE DURING CONSTRUCTION INCLUDING BUT NOT LIMITED TO INSPECTIONS, SWPPP UPDATES, ETC. CONTACT NORFOLK ENVIRONMENTAL SERVICES AT (757)664-4368 FOR FURTHER INFORMATION.
- CONTRACTOR SHALL BE CAUTIONED WHILE EXCAVATING ADJACENT TO EXISTING TREE ROOTS THAT ARE TO REMAIN.
 - TOPSOIL, SEED, FERTILIZE, AND LIME ALL DISTURBED AREAS WITHIN THE PROJECT LIMIT NOT OCCUPIED BY STRUCTURES, PAVEMENT, SIDEWALK, ETC., PER DETAIL HS-601.
 - TEMPORARY SEEDING OR STABILIZATION WILL BE REQUIRED WITHIN 7 DAYS OF COMPLETING EARTHWORK IF PERMANENT SEEDING CANNOT BE ESTABLISHED (SEE DETAILS SHEET 8E).
 - PROTECTIVE COVERING EC-2 INSTALLATION SHALL BE INCIDENTAL TO SILT FENCE INSTALLATION.
 - PRE-AUGERING MATERIAL SHALL BE DISPOSED IN OFFSITE UPLAND AREAS.

Trees to be Removed

3" HACKBERRY	1
5" HACKBERRY	1
6" HACKBERRY	1
8" HACKBERRY	2
9" HACKBERRY	1
15" HACKBERRY	3
18" HACKBERRY	1
24" MULBERRY	1

TOTAL CANOPY AREA 7013 SF

FHWA REGION	STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
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Demolition Legend

- XXXXX - DENOTES REMOVAL OF CURB AND GUTTER
- DENOTES REMOVAL OF ASPHALT WALK
- DENOTES REMOVAL OF CONCRETE WALK/FLUME
- DENOTES REMOVAL OF REINFORCED CONCRETE ROADWAY SURFACE
- SAW CUT
- DENOTES ERADICATION OF EXISTING PAVEMENT MARKINGS

Legend

- (SF) SILT FENCE, TYPE A
- (IP) STORM DRAIN INLET PROTECTION, TYPE B
- (TP) TREE PROTECTION
- (EC-2) PROTECTIVE COVERING
- (CE) CONSTRUCTION ENTRANCE
- (PS) PERMANENT SEEDING (SEE DETAIL SHEET 8E)
- EXISTING RIGHT OF WAY

Erosion and Sediment Control Narrative

- CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM JURISDICTIONAL AGENCIES PRIOR TO THE START OF ANY CONSTRUCTION RELATED ACTIVITIES.
- LIMITS OF THE RPA MUST BE SURVEY LOCATED AND FLAGGED IN THE FIELD WITH ORANGE SAFETY FENCE. CONTRACTOR IS PERMITTED TO WORK WITHIN RPA FOR PRE-AUGERING ONLY.
- INSTALL CONSTRUCTION TRAFFIC SIGNAGE INDICATING CONSTRUCTION ENTRANCE LOCATIONS AND PRESENCE OF CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH DETAILS.
- CLEAR THE AREA REQUIRED TO INSTALL EROSION AND SEDIMENT PERIMETER MEASURES, INCLUDING: SILT FENCE, TREE PROTECTION, AND INLET PROTECTION. EXISTING SANITARY SEWER MANHOLES AND DRAINAGE STRUCTURES SHALL BE PROTECTED AND SERVICE MAINTAINED THROUGHOUT CONSTRUCTION. PHASED INSTALLATION OF SILT FENCE SHALL ALLOW FOR BY-PASS STORMWATER FLOW.
- INSTALL CONSTRUCTION ENTRANCE.
- REMOVE EXISTING CONCRETE, ASPHALT, AND CURB AND GUTTER.
- CONTRACTOR SHALL BEGIN EARTHWORK OPERATIONS.
- INSTALL CURB AND GUTTER.
- FINE GRADE AND CONSTRUCT WALKWAY SECTIONS TO THE TOP OF STONE.
- INSTALL BRIDGE.
- FINE GRADE REMAINING SITE AREAS.
- INSTALL TOPSOIL, SEED, FERTILIZER, AND LIME ON NON-PAVED AREAS.
- APPLY SURFACE TO ALL HARDSCAPE AREAS INCLUDING PAVEMENT AND CONCRETE.
- UPON COMPLETION OF THE PROJECT, THE AREA MUST BE RESTORED TO ITS ORIGINAL CONDITION (BED AND BANK CONTOURS SHOULD BE RESTORED TO THE PRE-CONSTRUCTION CONDITIONS). ALL SEDIMENT AND EROSION CONTROL MEASURES SHOULD BE REMOVED FROM SITE WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION, UNLESS OTHERWISE DIRECTED BY THE PROJECT ENGINEER OR THE OWNER.
- INSTALL FINAL SIGNAGE.

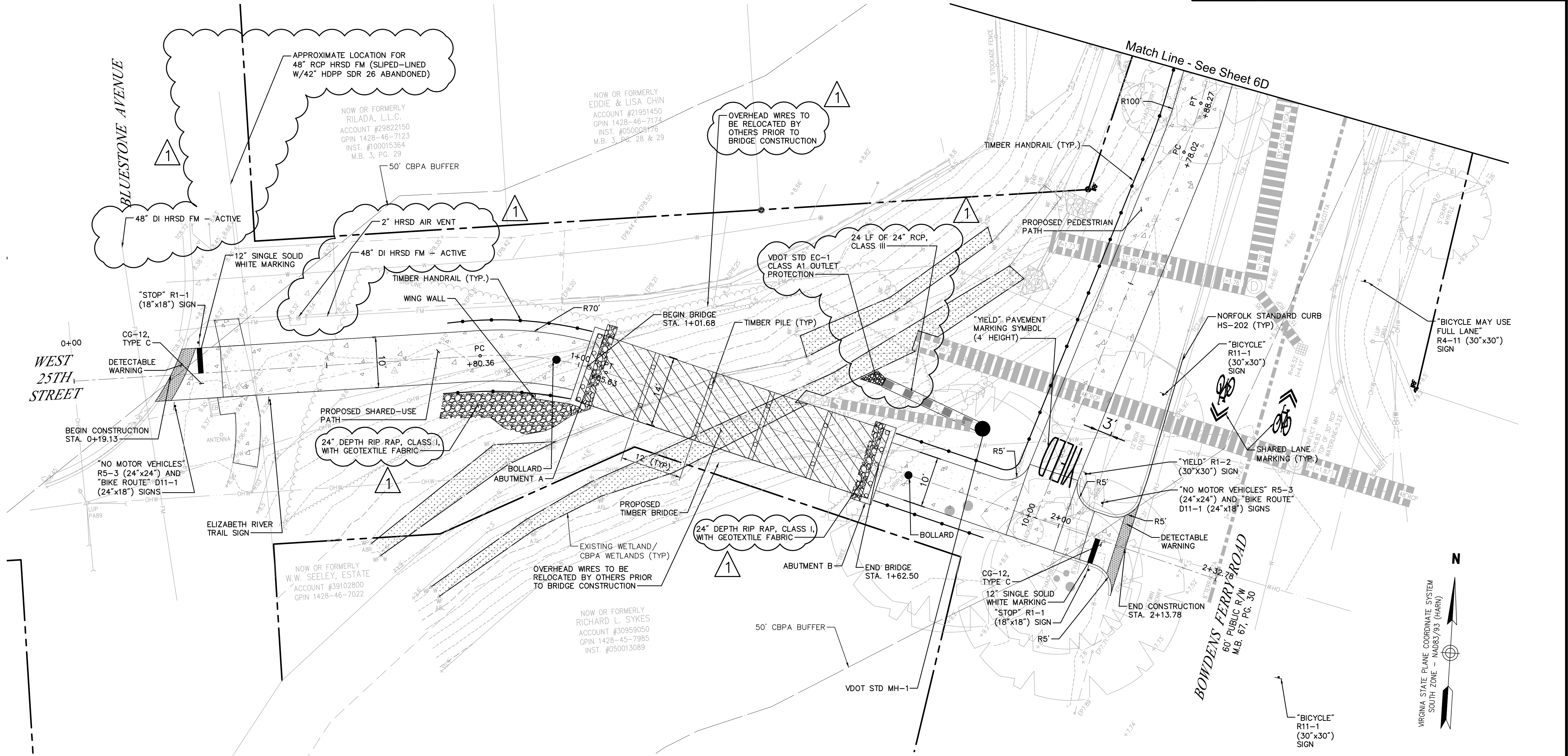
NO.	DATE	REVISION
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CITY OF NORFOLK DEPARTMENT OF PUBLIC WORKS		March 25, 2016
ELIZABETH RIVER TRAIL - PHASE V (NORFOLK PHASE IV-C)		
DEMOLITION AND EROSION & SEDIMENT CONTROL PLAN AREA 3 - BOWDENS FERRY & BLUESTONE		
 Vanasse Hangen Brustlin Inc. Two Columbus Center 4500 Main Street, Suite 400 Virginia Beach, Virginia 23462 Ph: 757.490.0132 Fax: 757.490.0136		SHEET NO. 6A

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FHWA REGION	STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
		PROJECT		PROJECT	
3	VA	TEA-5A03(734)	8711	EN00-122-138	6C



Legend

- 4" CONCRETE WALK (HRPDC CI-09)
- HEAVY DUTY CONCRETE (4" CONCRETE WITH 4" AGGREGATE)
- DETECTABLE WARNING SURFACE
- EXISTING RIGHT OF WAY
- TIMBER HANDRAIL

NOTES

- CONTRACTOR SHALL EXPOSE EXISTING CONCRETE WALK EDGES PRIOR TO CONSTRUCTING PROPOSED TIE INS.
- CONTRACTOR SHALL PROVIDE SUPPORT OF EXCAVATION AS REQUIRED TO COMPLETE THE WORK WITH THE EXISTING RIGHT OF WAY.
- TOPSOIL, SEED, FERTILIZE AND LIME ALL DISTURBED AREAS WITHIN THE PROJECT LIMIT NOT OCCUPIED BY STRUCTURES, PAVEMENT, SIDEWALKS, ETC. TEMPORARY SEEDING OR STABILIZATION WILL BE REQUIRED WITHIN 7 DAYS OF COMPLETING CONSTRUCTION.
- THE BOLLARDS SHALL BE PAINTED YELLOW.
- FOR SIGN DETAILS, SEE SHEET 8A.
- CONTRACTOR SHALL COORDINATE WITH COX, VERIZON AND DOMINION VIRGINIA POWER AND HRSD PRIOR TO STARTING CONSTRUCTION.
- TIMBER BRIDGE CONSTRUCTION SHALL BE LUMP SUM AND INCLUDE ALL MATERIALS AND WORK FOR CONSTRUCTION OF THE TIMBER BRIDGE, INCLUDING BUT NOT LIMITED TO: TIMBER MEMBERS, CONNECTORS, HARDWARE, RAILING, CONCRETE ABUTMENTS, AND REINFORCING STEEL.
- CONTRACTOR SHALL MAKE SURE THAT HRSD AIR VENT IS CLEARLY IDENTIFIED AND MAINTAIN VISIBLE DURING CONSTRUCTION.



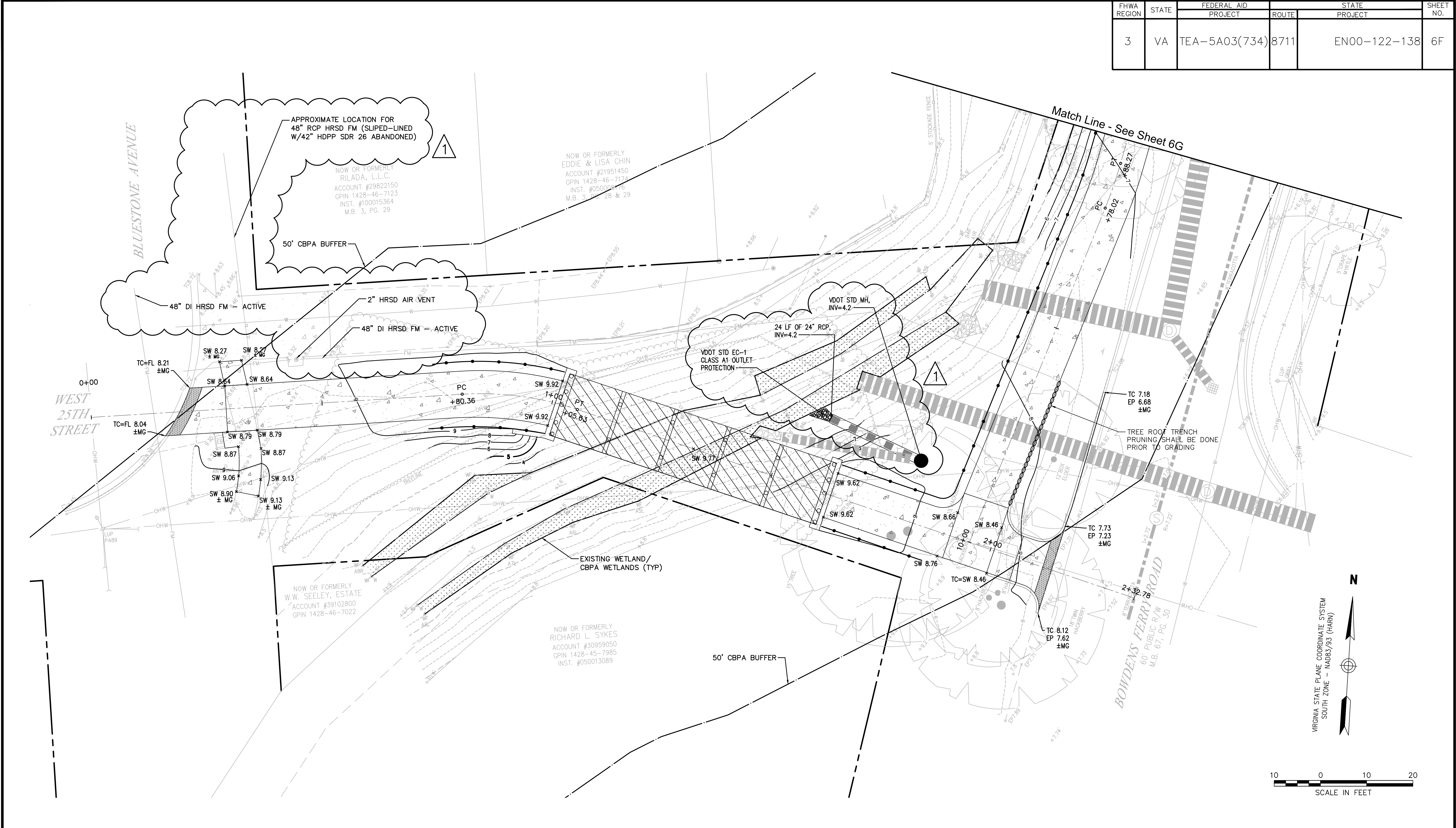
CITY OF NORFOLK DEPARTMENT OF PUBLIC WORKS ELIZABETH RIVER TRAIL - PHASE V (NORFOLK PHASE IV-C)	March 25, 2016
LAYOUT AND MATERIALS PLAN AREA 3 - BOWDENS FERRY & BLUESTONE	
 Vanasse Hangen Brustlin Inc. Two Columbus Center 4500 Main Street, Suite 400 Virginia Beach, Virginia 23462 Ph: 757.490.0132 Fax: 757.490.0136	SHEET NO. 6C

NO.	DATE	REVISION

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FHWA REGION	STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
		PROJECT		PROJECT	
3	VA	TEA-5A03(734)	8711	EN00-122-138	6F



1

1. CONTRACTOR SHALL TRENCH PRUNE TREE ROOTS PRIOR TO GRADING. PRUNING SHALL BE DONE ON THE UNDISTURBED SIDE OF THE CUT SLOPES TO PREVENT ROOTS FROM BEING TORN/BROKEN.
2. CONTRACTOR SHALL MAKE SURE THAT HRSD AIR VENT IS CLEARLY IDENTIFIED AND VISIBLE DURING CONSTRUCTION.

NO.	DATE	REVISION

Notes

CITY OF NORFOLK DEPARTMENT OF PUBLIC WORKS		March 25, 2016
ELIZABETH RIVER TRAIL - PHASE V (NORFOLK PHASE IV-C)		
GRADING PLAN AREA 3 - BOWDENS FERRY & BLUESTONE		
 Vanasse Hangen Brustlin Inc Two Columbus Center 4500 Main Street, Suite 400 Virginia Beach, Virginia 23462 Ph: 757.490.0132 Fax: 757.490.0136		SHEET NO. 6F

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\\VHB\PROJ\VABEACH\33808.05 NORFOLK ERT.PH IV C\CAD\TE\PLANSET\3380805-STRUCT

FHWA REGION	STATE	FEDERAL AID PROJECT	ROUTE	STATE PROJECT	SHEET NO.
3	VA	TEA-5A03(734)	8711	EN00-122-138	7

DESIGN NOTES

- DESIGN SPECIFICATIONS
AASHTO GUIDE SPECIFICATION FOR DESIGN OF PEDESTRIAN BRIDGES, 2ND EDITION
NATIONAL DESIGN SPECIFICATIONS FOR WOOD CONSTRUCTION AND SUPPLEMENT (NDS), 2005
- DESIGN LOADING
BRIDGE LOADING: 90 PSF PEDESTRIAN (BOLLARDS SHALL BE CONSTRUCTED AT THE BRIDGE ENTRANCE TO PREVENT VEHICULAR TRAFFIC)
RAIL LOADING: 50 PLF APPLIED VERTICALLY AND HORIZONTALLY
RAIL POST LOADING: 300 LB APPLIED TO THE CENTROID OF UPPER RAIL

TIMBER NOTES

- ALL TIMBER SHALL BE TREATED SOUTHERN PINE GRADE NO. 1 DENSE.
- MEMBER SIZE SHALL BE STANDARD "DRESSED" DIMENSIONS FOR LUMBER AS SPECIFIED BY THE SOUTHERN PINE INSPECTION BUREAU (SPIB) 1994 GRADING RULES.
- ALL FRAMING SHALL BE TRUE AND EXACT.
- ALL CONNECTIONS AND FASTENERS SHALL BE CAPABLE OF DEVELOPING THE FULL CAPACITY OF THE STRUCTURAL MEMBERS ACCORDING TO THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION AND NDS SUPPLEMENT.
- UNLESS OTHERWISE NOTED, ALL STEEL HARDWARE AND NAILS SHALL BE STAINLESS STEEL, TYPE 304 or 316.
- ALL THREADED RODS FOR PILE CAP AND LATERAL BRACING TO PILE CONNECTIONS SHALL CONFORM TO ASTM F593 GRADE 45. SPECIFICATIONS AND SHALL USE OVERSIZED OGEE WASHERS, LOCK WASHERS AND NUTS ON EACH END.
- UNLESS OTHERWISE NOTED, ALL MEMBERS (DECKING, RAILS, BALUSTERS, ETC.) SHALL BE FASTENED USING STAINLESS STEEL SCREWS. ALL CONNECTIONS EXPOSED TO HUMAN CONTACT SHALL BE COUNTERSUNK.
- USE BOLTED CONNECTIONS FOR STRINGER AND PILE CONNECTIONS. RAILING AND RAILPOST CONNECTIONS CAN BE EITHER BOLTED OR SCREWED. ALL BOLTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F593 UNLESS NOTED OTHERWISE. NUTS SHALL CONFORM TO THE REQUIREMENTS OF ASTM F594. WASHERS SHALL CONFORM TO THE REQUIREMENTS OF ASTM SS304 OR SS316.
- BOLTED FASTENERS SHALL NOT BE OVER TIGHTENED. LAG BOLT CONNECTIONS SHALL BE TIGHTENED SO THAT ELEMENTS COME TOGETHER WITHOUT STRIPPING OUT THE WOOD IN THE PREDRILLED HOLES. THROUGH BOLT CONNECTIONS SHALL BE TIGHTENED SO THAT WASHERS JUST START TO PRESS INTO THE WOOD SUBSTRATE. ALL THROUGH BOLT CONNECTIONS SHALL HAVE A FLAT WASHER ON BOTH SIDES AND LOCK WASHER UNDER ALL NUTS.
- ALL NAILS SHALL BE 12d STEEL RING SHANKED NAILS CONFORMING TO ASTM F593 UNLESS NOTED OTHERWISE. ALL LAG BOLTS SHALL COMPLY WITH THE REQUIREMENTS OF ANSI/ASME STANDARD B18.2.1, GRADE 2. ALL CONNECTIONS OR FRAMING NOT OTHERWISE DETAILED ON THE PLANS SHALL BE DESIGNED AND DETAILED BY THE CONTRACTOR. THE CONTRACTOR SHALL SUBMIT THEIR PROPOSED DETAILS FOR APPROVAL PRIOR TO BEGINNING THE WORK OR ORDERING MATERIALS.
- BLOCKING SHALL BE FASTENED WITH NAILS.
- NAILS AND SPIKES SHALL BE DRIVEN WITH THE HEADS COUNTERSUNK 1/16" BELOW THE SURFACE OF THE WOOD.
- STRINGER TO SUBSTRUCTURE STEEL ANGLE AND LAG SCREWS SHALL BE HOT DIPPED GALVANIZED.
- CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO BEGINNING THE WORK.

TIMBER PILING

- PILES SHALL BE 12" DIAMETER BUTT WITH A MINIMUM 8" DIAMETER TIP MEETING THE ASTM D-25 SPECIFICATIONS.
- PILES SHALL BE DRIVEN TO ACHIEVE A 10 TON DESIGN LOAD (UNFACTORED) TO A MINIMUM TIP ELEVATION OF -25.00.
- PILE DRIVING HAMMER SPECIFICATIONS SHALL BE SUBMITTED TO THE ENGINEER TO ASSESS PILE DRIVING SUITABILITY. PRE-AUGERING UP TO 3' MAY BE REQUIRED. PRICE FOR PRE-AUGERING SHALL BE INCIDENTAL TO THE UNIT COST OF PILES. PILE DRIVING HAMMER MINIMUM REQUIREMENTS PER THE GEOTECHNICAL RECOMMENDATIONS IN THE REFERENCED GEOTECHNICAL REPORT "REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING SERVICES - ELIZABETH RIVER TRAIL", DATED AUGUST 18, 20014.
- AT LEAST ONE TEST PILES SHALL BE PROVIDED. TEST PILES MAY BE PRODUCTION PILES. COST FOR TEST PILES AND LOADING TEST SHALL BE INCIDENTAL TO THE UNIT COST OF PILES.

- CONTRACTOR SHALL IMPLEMENT A WAVE EQUATION ANALYSIS AND SUBMIT THE RESULTS FOR THE TEST PILES IN ACCORDANCE WITH THE GEOTECHNICAL RECOMMENDATIONS IN THE REFERENCED GEOTECHNICAL REPORT "REPORT OF SUBSURFACE EXPLORATION AND GEOTECHNICAL ENGINEERING SERVICES - ELIZABETH RIVER TRAIL", DATED AUGUST 18, 2014.
- PILES SHALL BE IN ONE PIECE, SPLICES WILL NOT BE ALLOWED. PILES SHALL BE INSTALLED SO AXIAL ALIGNMENT IS WITHIN ¼INCH PER FOOT FROM THE VERTICAL SHOWN ON THE PLANS. HORIZONTALLY, KEEP THE FINAL PILE HEAD LOCATION WITHIN 3 INCHES OF THE PLAN LOCATION LONGITUDINALLY AND TRANSERVERSLY.
- CONTRACTOR SHALL SUBMIT DATA SHEETS FOR PILE DRIVING EQUIPMENT.
- CONTRACTOR SHALL SUBMIT A PILE DRIVING PLAN TO THE ENGINEER FOR APPROVAL PRIOR TO MOBILIZING EQUIPMENT. PLAN SHOULD INCLUDE PROCEDURES FOR PILE INSTALLATION.
- PILE INSTALLATION SHOULD BE CONTINUOUS WITHOUT TERMINATING.
- CONTRACTOR SHALL PROVIDE TIMBER PILES LOGS WITH TIP ELEVATIONS TO THE ENGINEER FOR THE APPROVAL.

- PRIOR TO PILE DRIVING OPERATIONS, THE CONTRACTOR SHALL PERFORM AN INTERIOR AND EXTERIOR INSPECTION OF ALL STRUCTURES, INCLUDING ADJACENT BUILDINGS, WITHIN 100 FEET OF THE PROPOSED PILE LOCATIONS. ADDITIONAL STRUCTURES MAY BE SURVEYED AS DEEMED NECESSARY BY THE CONTRACTOR. THE PRECONSTRUCTION SURVEY SHOULD CONSIST OF VISUAL INSPECTION AND DOCUMENTATION (WRITTEN, PHOTOGRAPHIC, AND/OR VIDEO) OF THE EXISTING STRUCTURE(S). DOCUMENTATION OF THIS PRE-CONSTRUCTION INSPECTION SHALL BE SUBMITTED TO THE CITY FOR THEIR RECORDS.
- ALL STRUCTURES, INCLUDING ADJACENT BUILDINGS, WITHIN 100 FEET OF THE PROPOSED PILE DRIVING SHALL BE MONITORED DURING PILE DRIVING ACTIVITIES. MONITORING SHALL INCLUDE, BUT NOT BE LIMITED TO, VISUAL INSPECTIONS, THE PLACEMENT OF CRACK MONITORS, MONITORING POINTS ON THE EXTERIOR OF STRUCTURES, AND GROUND DEFORMATION MONITORS. GROUND VIBRATIONS SHALL BE MONITORED WITH ONE OR MORE SEISMOGRAPHS DURING PILE DRIVING ACTIVITIES. THE SEISMOGRAPHS SHALL BE PLACED ON THE SOLID GROUND ADJACENT TO VIBRATION-SENSITIVE LOCATIONS. IF GROUND VIBRATIONS EXCEED 0.25"/SEC, PILE DRIVING OPERATIONS SHALL BE STOPPED AND MONITORING POINTS SHALL BE EVALUATED FOR IMPACTS. DRIVING PROCEDURES SHALL BE REVIEWED AND ADJUSTED AS REQUIRED PRIOR TO PROCEEDING WITH PILE INSTALLATION OPERATIONS.

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TIMBER TREATMENT

- ALL TIMBER SHALL BE TREATED USING WATERBORNE PRESERVATIVES TO A MINIMUM RETENTION OF 0.60 LB/CF. TIMBER USED FOR HAND-CONTACT SURFACES SUCH AS HANDRAILS, BALLUSTERS, AND DECKING SHALL BE TREATED WITH EITHER AMMONIACAL COPPER QUATERNARY (ACQ) SALT AT 0.60 LB/CF OR COPPER AZOLE (CA) PRESERVATIVE AT 0.31 LB/CF.
- TIMBER PILES SHALL HAVE A MINIMUM RETENTION OF 2.5 LB/CF AND SHALL BE TREATED WITH CHROMATED COPPER ASRENTATE (CCA). CCA SHALL NOT BE USED ON ANY OTHER TIMBER MEMBERS.
- CUTS, ABRASIONS, NOTCHED MEMBERS, AND BOLT HOLES BORED AFTER PRESERVATIVE TREATMENT SHALL BE TREATED WITH THE SAME PRESERVATIVE AS THE TYPE USED TO TREAT THE PRODUCT. WHEN FIELD APPLICATIONS OF THE PRESERVATIVE ARE REQUIRED, THE MATERIALS SHALL BE FURNISHED, PREPARED, AND APPLIED IN ACCORDANCE WITH AWPA STANDARD M4.
- CONTRACTOR SHALL SUBMIT THE INSPECTION REPORT FROM AN INDEPENDENT INSPECTION AGENCY, FOR APPROVAL BY THE OWNERS REPRESENTATIVE THAT OFFERS PRODUCTS COMPLYING WITH APPLICABLE AWPA STANDARDS. INDEPENDENT INSPECTION AGENCY TO IDENTIFY TREATMENT ON EACH PIECE BY QUALITY MARK OF AN AGENCY ACCREDITED BY THE BOARD OF REVIEW OF THE AMERICAN LUMBER STANDARD COMMITTEE.


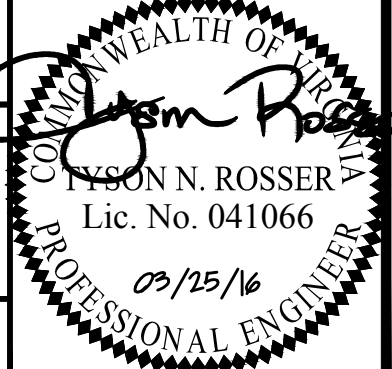
CONCRETE NOTES

- CONCRETE SHALL BE CLASS A-3 CONCRETE WITH A 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.
- REINFORCING STEEL SHALL BE CORROSION RESISTANT PER VDOT SPECIFICATION, SECTION 223.
- ALL REINFORCING SHALL HAVE A CLEAR DISTANCE OF 3", UNLESS OTHERWISE NOTED.
- PROVIDE 1" CHAMFERS ON ALL EXPOSED EDGES OF CONCRETE UNLESS OTHERWISE SPECIFIED.

CONSTRUCTION LOADS

- CONSTRUCTION LIVE LOAD SURCHARGE FROM HEAVY EQUIPMENT IS NOT PERMITTED AGAINST SUBSTRUCTURES. ALL CONSTRUCTION EQUIPMENT, WITH THE EXCEPTION OF A PLATE COMPACTOR, SHALL MAINTAIN A MINIMUM OF 10'-0" CLEAR DISTANCE BACK OF SUBSTRUCTURES.

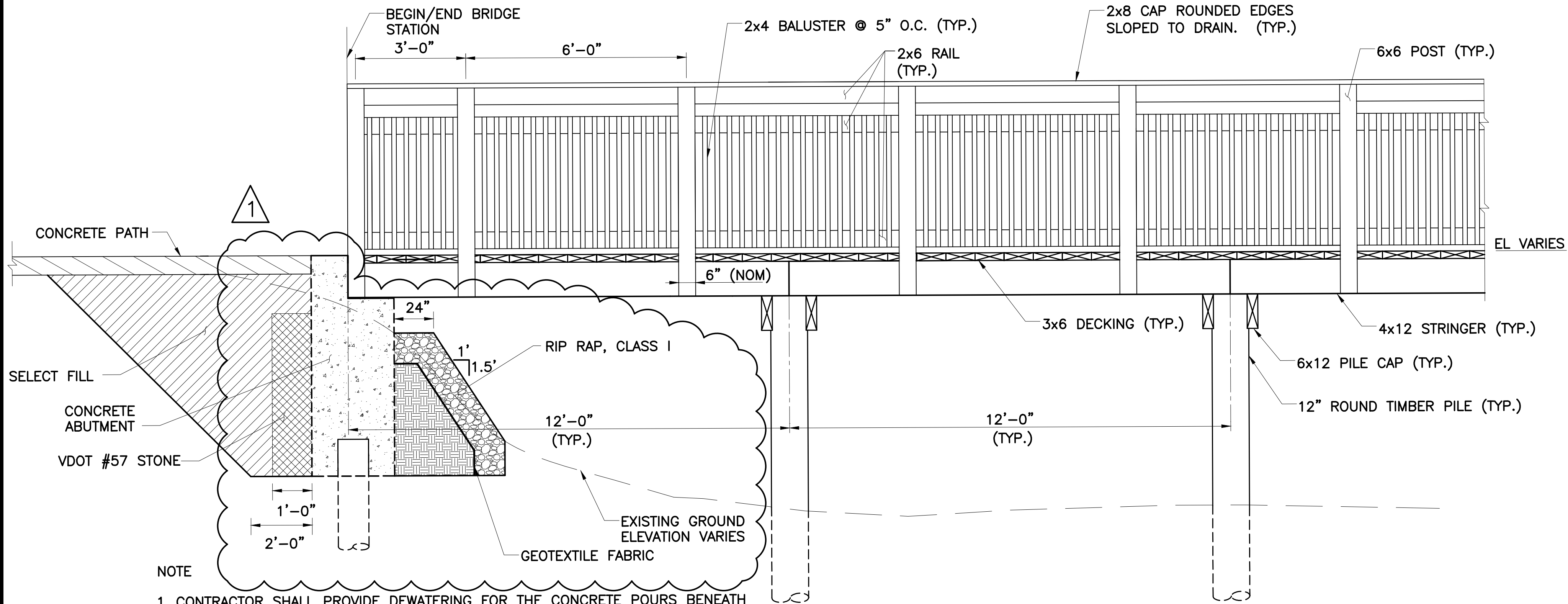
NO.	DATE	REVISION

CITY OF NORFOLK DEPARTMENT OF PUBLIC WORKS	March 25, 2016
ELIZABETH RIVER TRAIL - PHASE V (NORFOLK PHASE IV-C)	
STRUCTURE NOTES AREA 3 - BOWDENS FERRY & BLUESTONE	
 Vanasse Hangen Brustlin Inc Two Columbus Center 4500 Main Street, Suite 400 Virginia Beach, Virginia 23462 Ph: 757.490.0132 Fax: 757.490.0136	 SHEET NO. 7

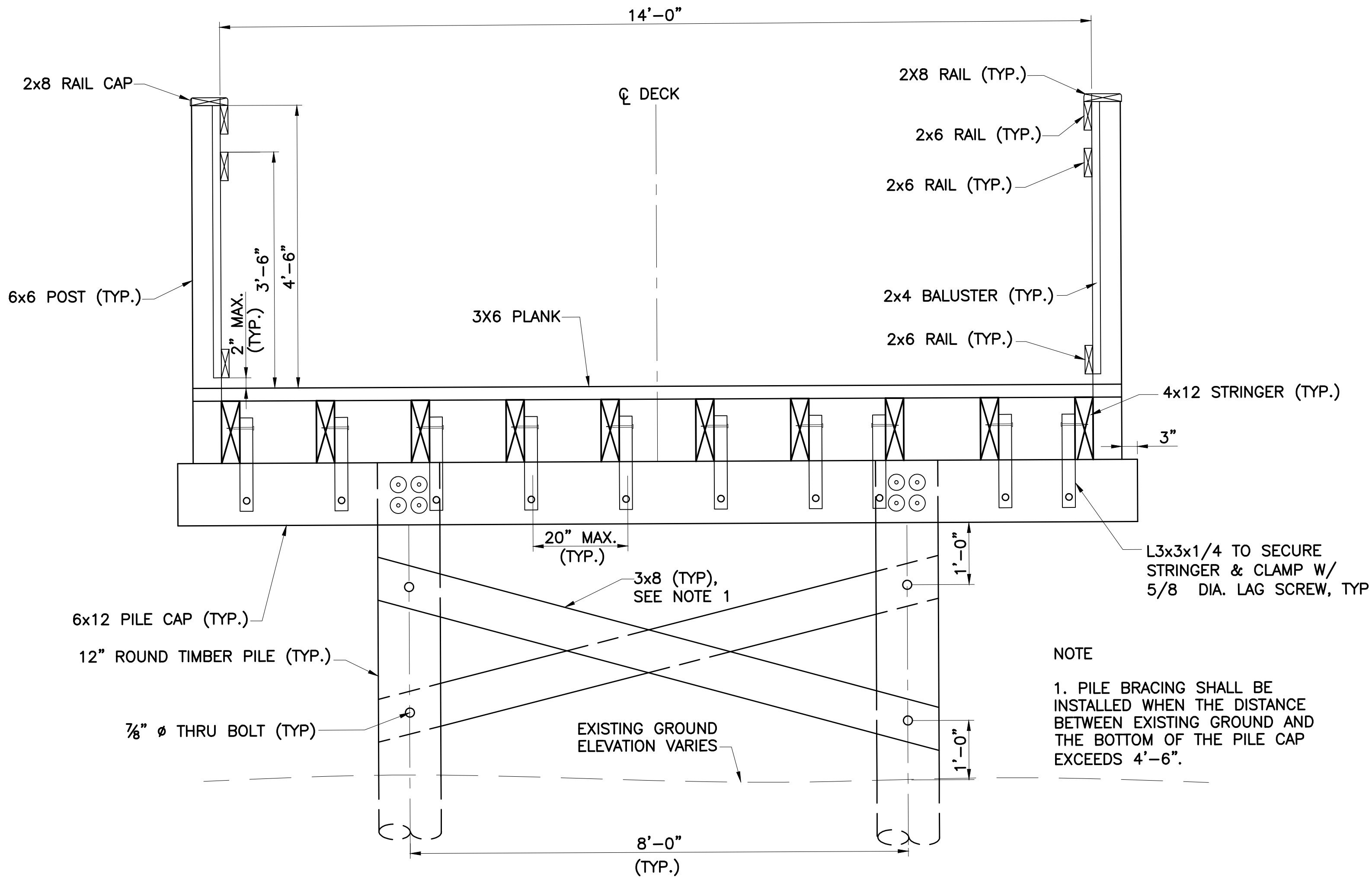
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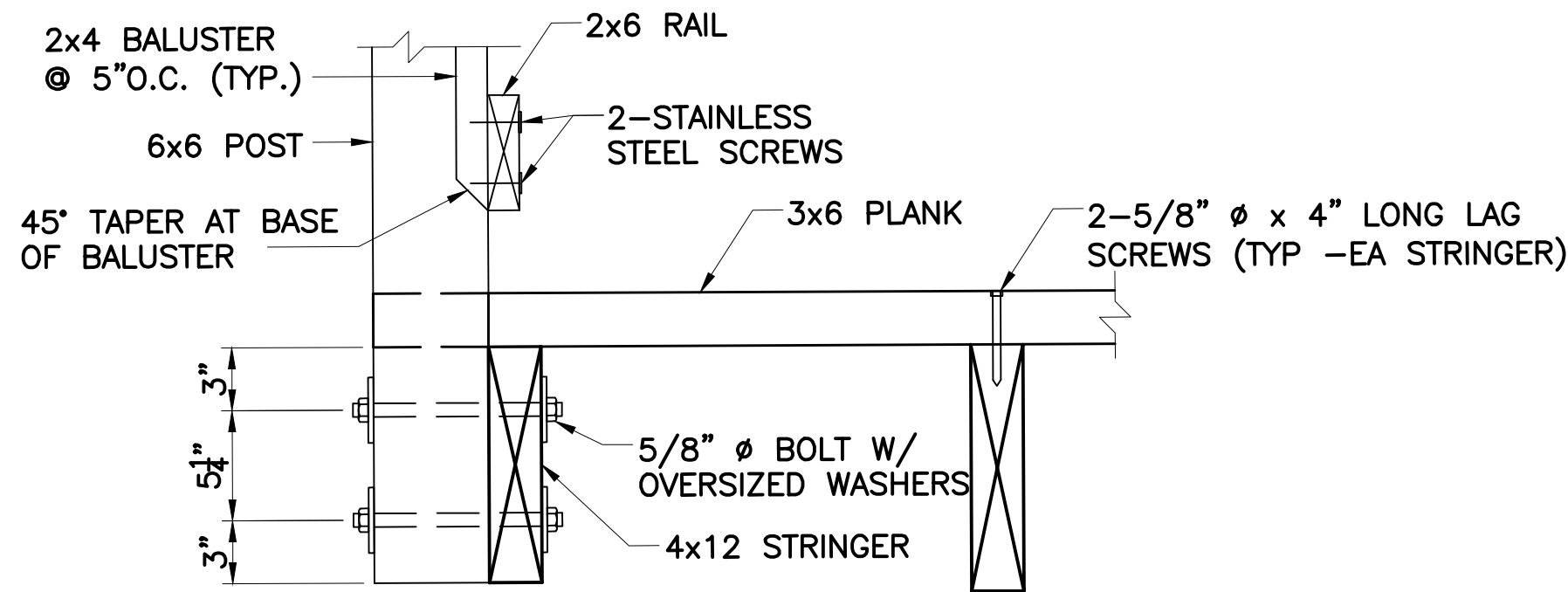
FHWA REGION	STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
		PROJECT		PROJECT	
3	VA	TEA-5A03(734)	8711	EN00-122-138	7A



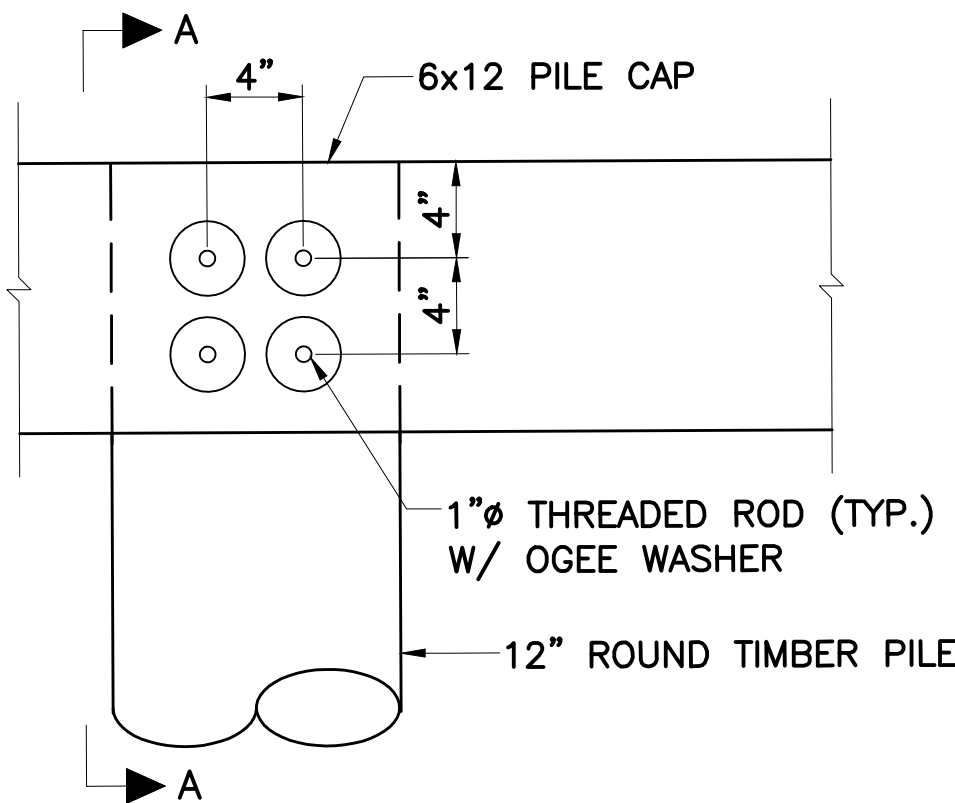
PARTIAL ELEVATION
SCALE: 1/2" = 1'-0"



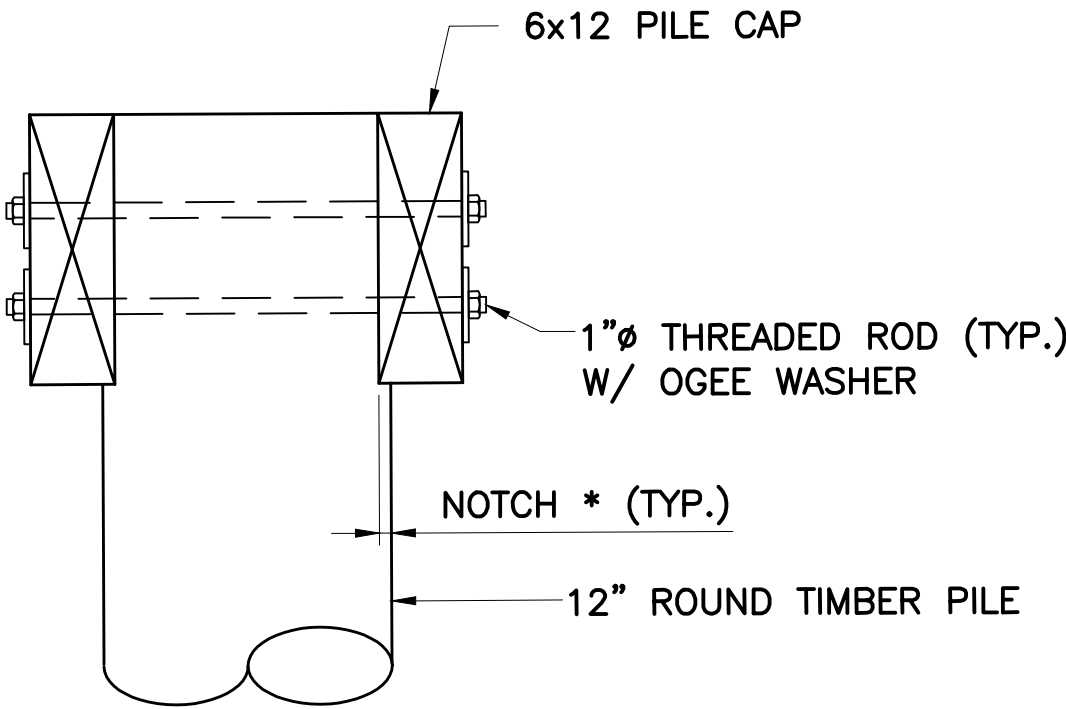
TYPICAL SECTION
SCALE: 3/4" = 1'-0"



POST CONNECTION DETAIL
SCALE: 1 1/2" = 1'-0"



ELEVATION



SECTION A-A

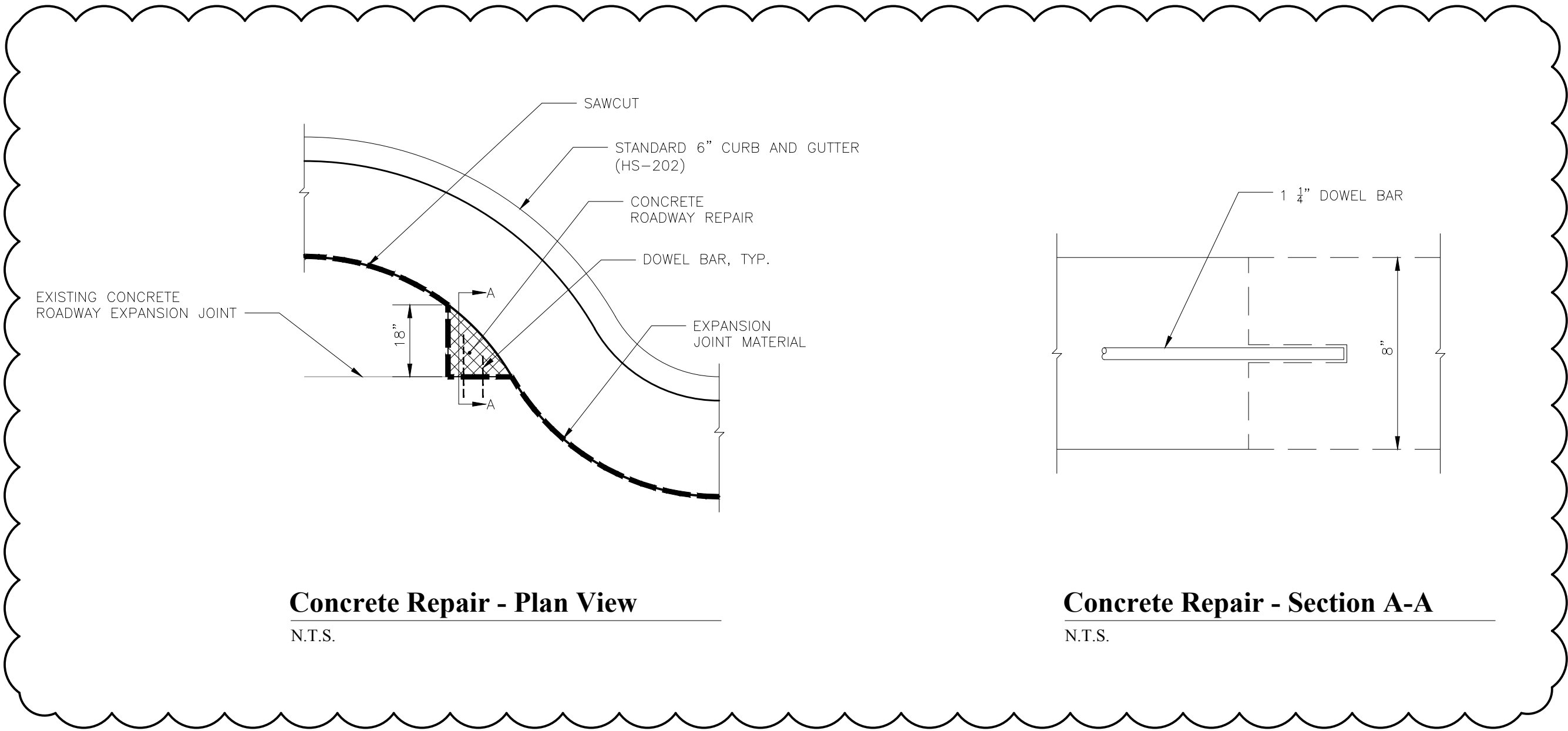
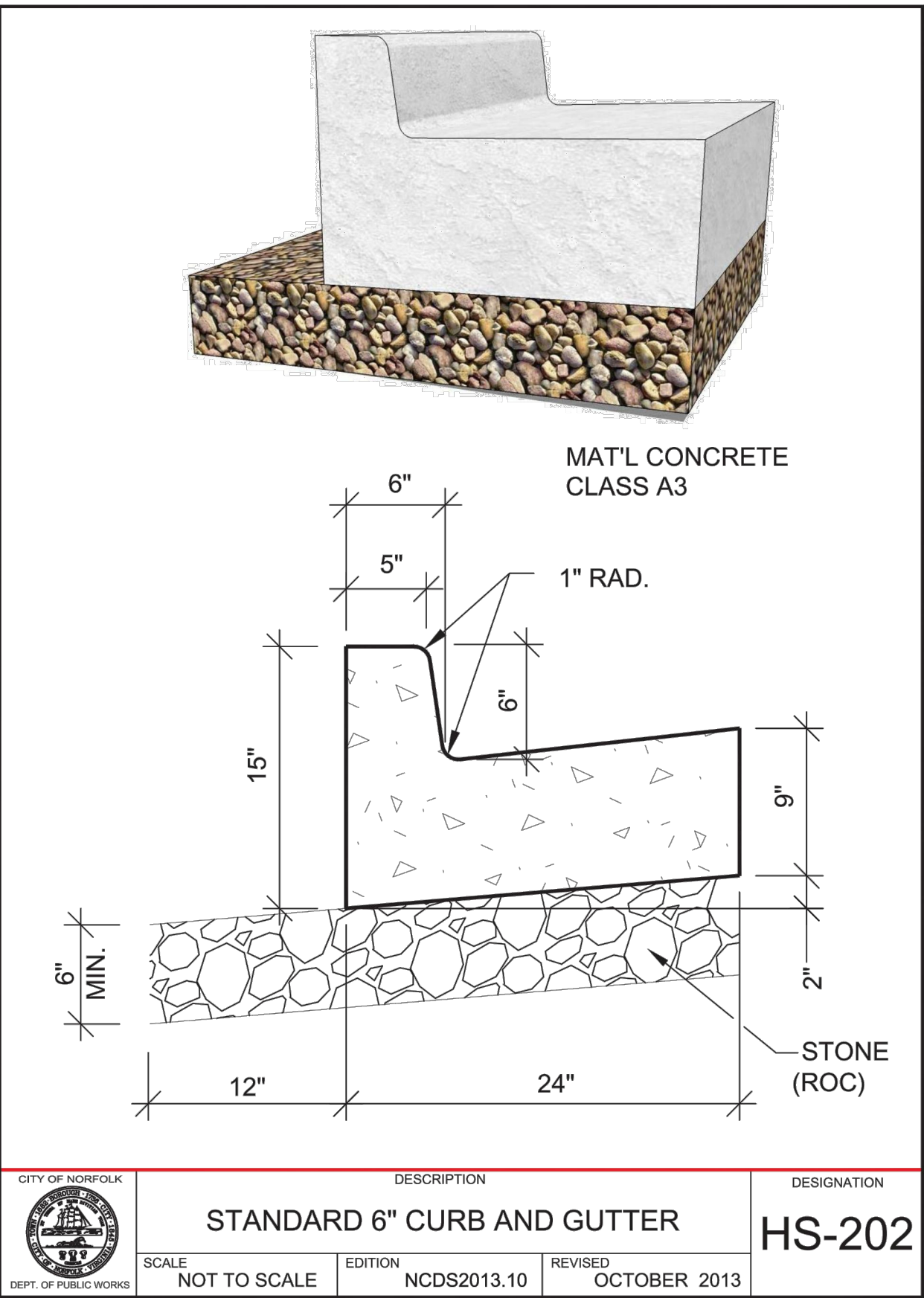
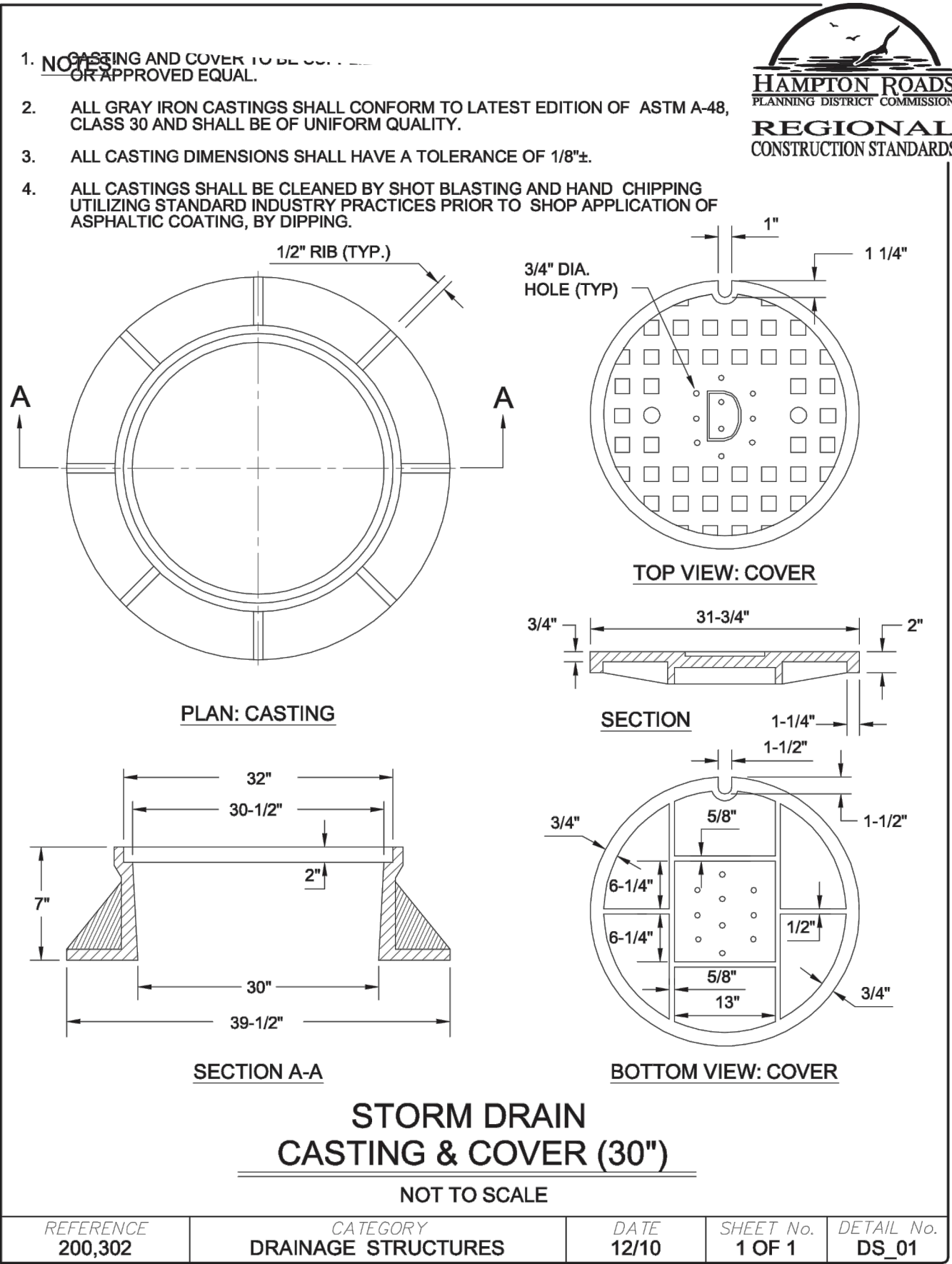
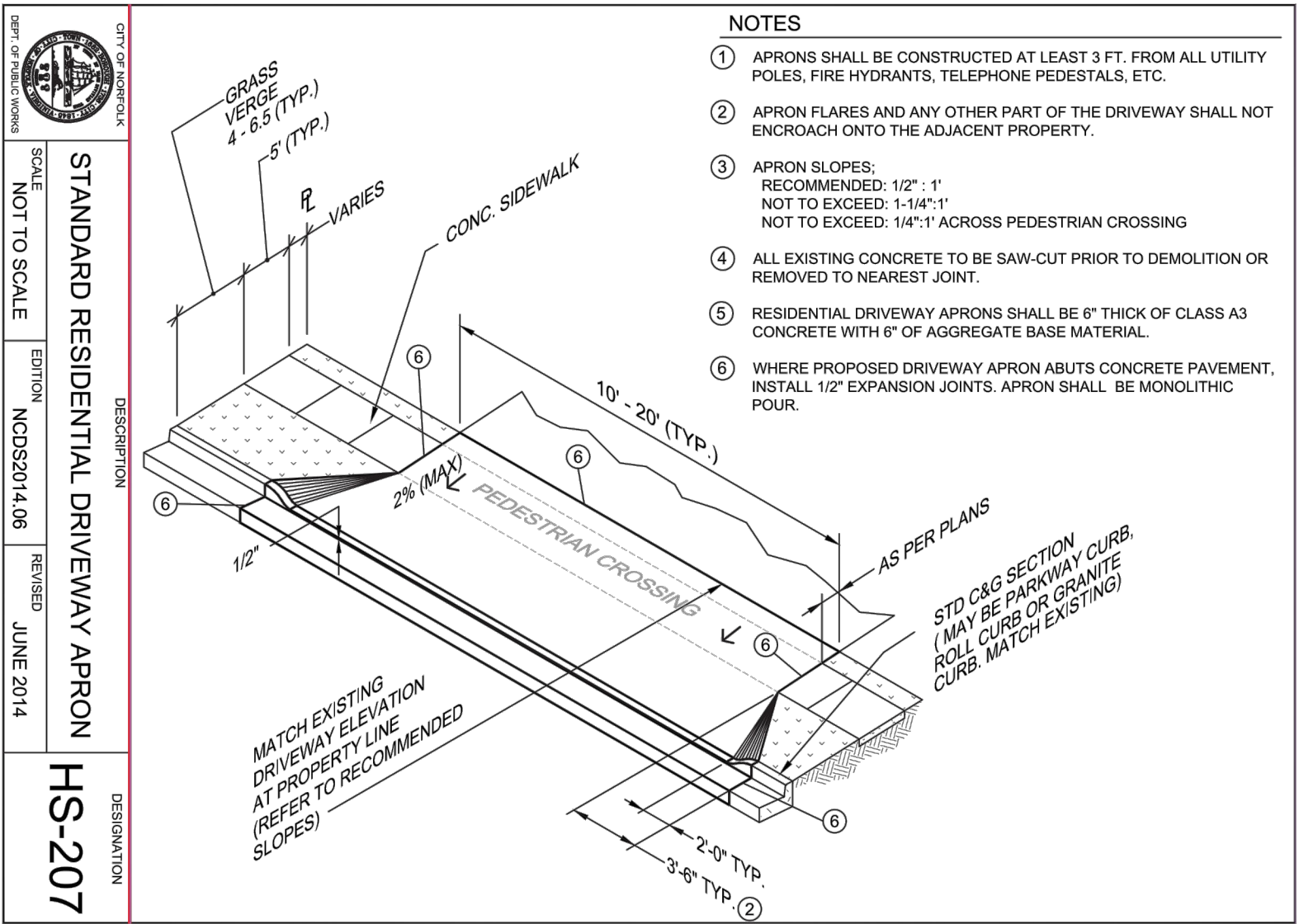
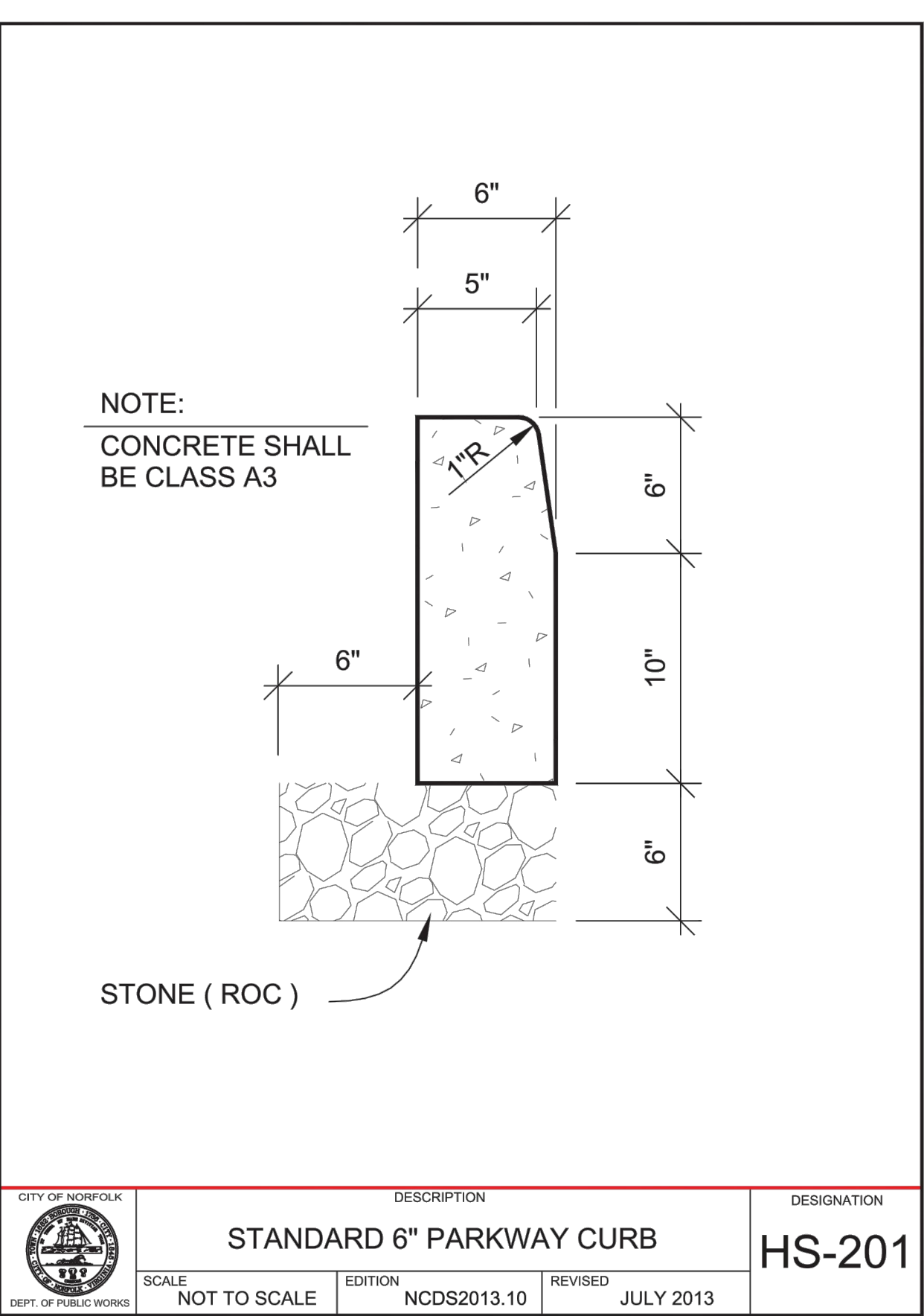
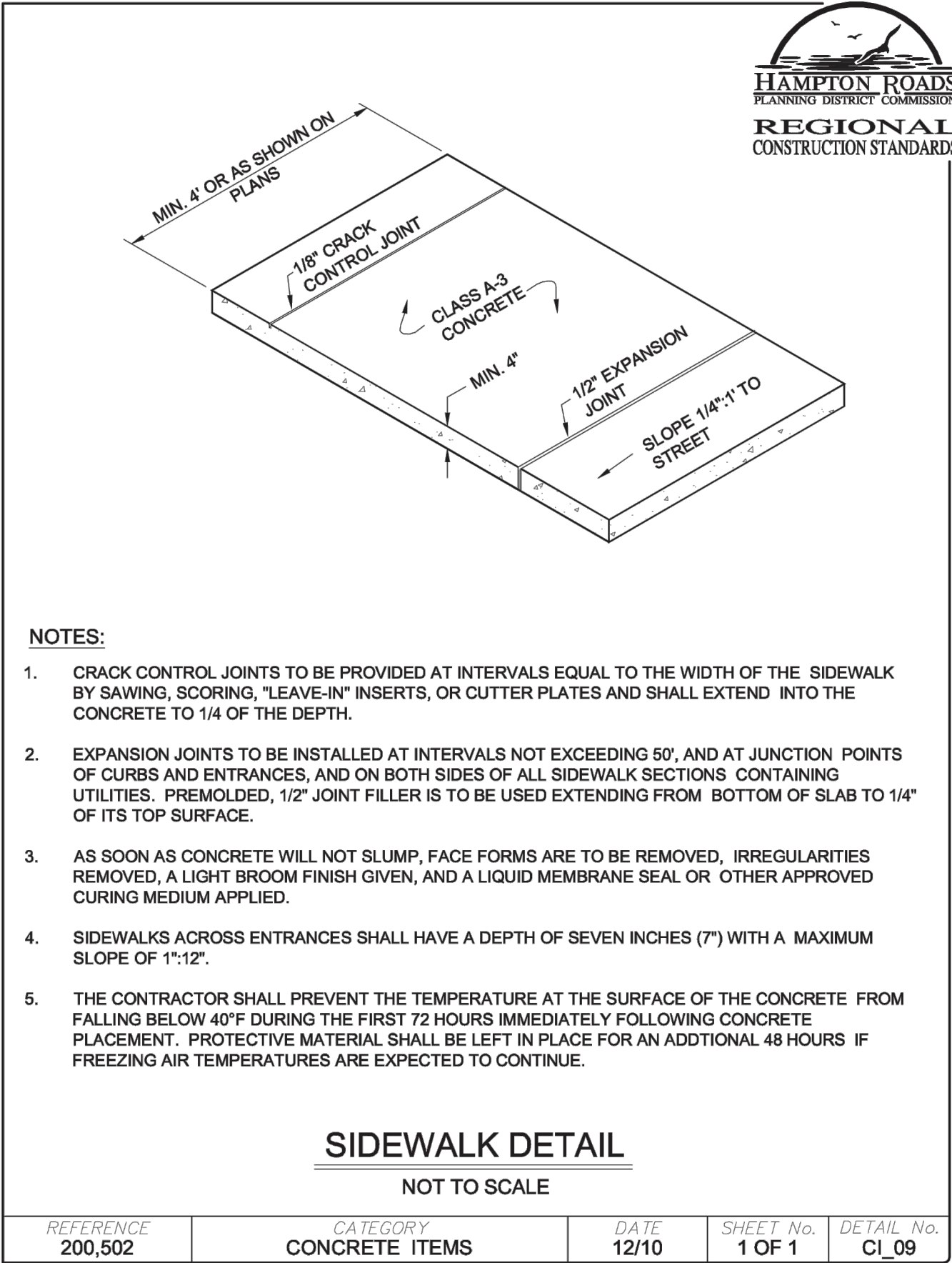
PILE CAP CONNECTION DETAILS
* NOTCH PILES TO PROVIDE FLUSH CONNECTION TO PILE CAPS.
SCALE: 1 1/2" = 1'-0"

CITY OF NORFOLK DEPARTMENT OF PUBLIC WORKS		March 25, 2016
ELIZABETH RIVER TRAIL - PHASE V (NORFOLK PHASE IV-C)		
STRUCTURE PLAN AREA 3 - BOWDENS FERRY & BLUESTONE		
Vanasse Hangen Brustlin, Inc. Two Columbus Center 4500 Main Street, Suite 400 Virginia Beach, Virginia 23462 Ph: 757.490.0132 Fax: 757.490.0136		
SHEET NO. 7A		

Saved Tuesday, March 29, 2016 11:52:30 AM MBLTHE Plotted Wednesday, May 04, 2016 3:57:03 PM Blythe, Magdalena

\\VHB\PROJ\VABEACH\33808.05 NORFOLK ERT PH IV C\CAD\TE\PLANSET\3380805-DT

FHWA REGION	STATE	FEDERAL AID	ROUTE	STATE	SHEET NO.
		PROJECT		PROJECT	
3	VA	TEA-5A03(734)	8711	EN00-122-138	8



NO.	DATE	REVISION

CITY OF NORFOLK
DEPARTMENT OF PUBLIC WORKS

ELIZABETH RIVER TRAIL - PHASE V
(NORFOLK PHASE IV-C)

March 25, 2016

THOMAS N. ROSSER
Lic. No. 041066
03/15/16
PROFESSIONAL ENGINEER

DETAILS

Vanasse Hangen Brustlin Inc.
Two Columbus Center
4500 Main Street, Suite 400
Virginia Beach, Virginia 23462
Ph: 757.490.0132 Fax: 757.490.0136

SHEET NO. 8